

ECONOMIC RESEARCH SERVICE

FY 2005 Summary of Budget and Performance Statement of Agency Goals and Objectives

ERS has six strategic goals which correspond to each of the six USDA strategic goals. To achieve these goals, the mission of ERS is to inform and enhance public and private decisionmaking on economic and policy issues related to agriculture, food, the environment, and rural development.

USDA Strategic Goal/Objective	Agency Strategic Goal	Agency Strategic Objectives	Programs that contribute	Key Outcome
USDA Strategic Goal 1: Enhance international competitiveness of American agriculture. USDA Strategic Objective 1.1: Expand and maintain international export opportunities. USDA Strategic Objective 1.2: Support international economic development and trade capacity building. USDA Strategic Objective 1.3: Improved sanitary and phytosanitary system to facilitate agricultural trade.	Agency Strategic Goal 1: Enhance international competitiveness of American agriculture.	Objective 1.1: Expand and maintain international export opportunities. Objective 1.2: Support international economic development and trade capacity building. Objective 1.3: Improved sanitary and phytosanitary system to facilitate agricultural trade.	Economic Research and Analysis.	Enhanced understanding by policymakers, regulators, program managers, and those shaping public debate of economic issues affecting the U.S. food and agriculture sector's international competitiveness, including factors related to international trade agreements and negotiations, market and nonmarket trade barriers, and the effects of economic and technological developments on agricultural competitiveness.
USDA Strategic Goal 2: Enhance the competitiveness and sustainability of rural and farm economies. USDA Strategic Objective 2.1: Expand domestic market opportunities. USDA Strategic Objective 2.2: Increase the efficiency of domestic agricultural production and marketing systems. USDA Strategic Objective 2.3:	Agency Strategic Goal 2: Enhance the competitiveness and sustainability of rural and farm economies.	Objective 2.1: Expand domestic market opportunities. Objective 2.2: Increase the efficiency of domestic agricultural production and marketing systems. Objective 2.3: Provide risk management and financial tools to farmers and ranchers.	Economic Research and Analysis.	Enhanced understanding by policymakers, regulators, program managers, and those shaping public debate of economic issues affecting the U.S. food and agriculture sector's competitiveness, including factors related to performance, structure, risk and uncertainty, and marketing.

Provide risk management and financial tools to farmers and ranchers.				
<p>USDA Strategic Goal 3: Support increased economic opportunities and improved quality of life in rural America.</p> <p>USDA Strategic Objective 3.1: Expand economic opportunities by using USDA financial resources to leverage private-sector resources and create opportunities for growth.</p> <p>USDA Strategic Objective 3.2: Improve the quality of life through USDA financing of quality housing, modern utilities, and needed community facilities.</p>	<p>Agency Strategic Goal 3: Support increased economic opportunities and improved quality of life in rural America.</p>	<p>Objective 3.1: Expand economic opportunities by using USDA financial resources to leverage private-sector resources and create opportunities for growth.</p> <p>Objective 3.2: Improve the quality of life through USDA financing of quality housing, modern utilities, and needed community facilities.</p>	Economic Research and Analysis.	Enhanced understanding by policymakers, regulators, program managers, and organizations shaping public debate of economic issues affecting rural development, including factors related to farm finances and investments in rural people, businesses and communities, and of economic issues relating to the performance of all sizes of American farms.
<p>USDA Strategic Goal 4: Enhance protection and safety of the Nation's agriculture and food supply.</p> <p>USDA Strategic Objective 4.1: Reduce the incidence of foodborne illnesses related to meat, poultry, and egg products in the U.S.</p> <p>USDA Strategic Objective 4.2: Reduce the number and severity of agricultural pest and disease outbreaks.</p>	<p>Agency Strategic Goal 4: Enhance protection and safety of the Nation's agriculture and food supply.</p>	<p>Objective 4.1: Reduce the incidence of foodborne illnesses related to meat, poultry, and egg products in the U.S.</p> <p>Objective 4.2: Reduce the number and severity of agricultural pest and disease outbreaks.</p>	Economic Research and Analysis.	Enhanced understanding by policymakers, regulators, program managers, and those shaping public debate of economic issues related to improving the efficiency, efficacy, and equity of public policies and programs designed to protect consumers from unsafe food.
<p>USDA Strategic Goal 5: Improve the Nation's nutrition and health.</p> <p>USDA Strategic Objective 5.1: Ensure access to nutritious food</p> <p>USDA Strategic Objective 5.2: Promote healthier eating habits and lifestyles.</p>	<p>Agency Strategic Goal 5: Improve the Nation's nutrition and health.</p>	<p>Objective 5.1: Ensure access to nutritious food.</p> <p>Objective 5.2: Promote healthier eating habits and lifestyles.</p> <p>Objective 5.3: Improve nutrition assistance program management and customer</p>	Economic Research and Analysis.	Enhanced understanding by policymakers, regulators, program managers, and organizations shaping public debate of economic issues relating to the nutrition and health of the U.S. population, including factors related to food choices, consumption patterns at and away

USDA Strategic Objective 5.3: Improve nutrition assistance program management and customer service.		service.		from home, food prices, nutrition assistance programs, nutrition education, and food industry structure. Such understanding underpins the capacity to ensure equitable access to a wide variety of high-quality, affordable food.
USDA Strategic Goal 6: Protect and enhance the Nation's natural resource base and environment. USDA Strategic Objective 6.1: Protect watershed health to ensure clean and abundant water. USDA Strategic Objective 6.2: Enhance soil quality to maintain productive working cropland. USDA Strategic Objective 6.3: Protect forests and grazing lands. USDA Strategic Objective 6.4: Protect and enhance wildlife habitat to benefit desired, at-risk and declining species.	Agency Strategic Goal 6: Protect and enhance the Nation's natural resource base and environment.	Objective 6.1: Protect watershed health to ensure clean and abundant water. Objective 6.2: Enhance soil quality to maintain productive working cropland. Objective 6.3: Protect forests and grazing lands. Objective 6.4: Protect and enhance wildlife habitat to benefit desired, at-risk and declining species.	Economic Research and Analysis.	Enhanced understanding by policymakers, regulators, program managers, and those shaping public debate of economic issues related to development of Federal farm, natural resource, and rural policies and programs to protect and maintain the environment while improving agricultural competitiveness and economic growth.

Goal 1: Enhance International Competitiveness of American Agriculture

<u>Project Statement</u>							
(On basis of appropriation)							
	2005 Actual		2006 Budget		2007 Estimated		
	<u>Amount</u>	<u>Staff Years</u>	<u>Amount</u>	<u>Staff Years</u>	<u>Increase or Decrease</u>	<u>Amount</u>	<u>Staff Years</u>
Goal 1:	\$13,468,931	103	\$13,546,000	105	\$272,000	\$13,818,000	105

Competitiveness in the global economy means being able to create and sustain comparative advantages consistent with resource endowments and technical capabilities. The ERS program assesses policies and programs intended to break down trade barriers in order to capitalize on comparative advantage. Regular market analysis and outlook provides insight into the global conditions of competition facing U.S. agriculture.

ERS continually develops and disseminates research and analysis on the U.S. food and agriculture sector's competitiveness. Key emphasis areas include the World Trade Organization (WTO) and regional trade agreements, domestic policy reforms, and the structure and performance of agricultural commodity markets. ERS activities provide a foundation of research, analysis, and data to support USDA goals. In-depth analysis of agricultural market conditions and research and analysis aimed at fostering economic growth and understanding foreign market structures round out the range of emphasis areas that enhance international competitiveness of American agriculture.

Selected Examples of Recent Progress:

Global Markets for High Value Foods. Understanding the myriad factors that affect the choice of locations to produce and sell food products sheds light on the competitiveness of U.S. agriculture in global markets. Two new reports—*New Directions in Global Food Markets* and *Market Access for High-Value Foods*—show how food trade patterns are strongly influenced by the changing nature of competition in the global food industry. Key factors include shifting consumer preferences, the growth in multinational food retailers, and changes in global supply chains. Consumer-driven changes are increasingly pushing food suppliers to meet consumer demand and preferences at a local level, even as the food industry becomes more global. In 2004, a new briefing room on the ERS website was initiated to provide an overview of high-value food markets, including data on trade and foreign investment.

China in 21st Century Agricultural Markets. China is one of the top 10 markets for U.S. agricultural exports and the world's largest producer and consumer of a range of commodities. ERS maintains an active research program that investigates how policy and economic developments in China affect global agricultural markets. The report, *China's New Farm Subsidies*, considers the implications of a shift in China's policy in 2004 when it began to subsidize rather than tax agriculture, reflecting a new view of agriculture as a sector that needs a helping hand. China introduced direct subsidies to farmers, began to phase out its centuries-old agricultural tax, subsidized seed and machinery purchases, and increased spending on rural infrastructure. The subsidies are targeted at grain producers, but they do not provide strong incentives to increase grain production. Other ERS publications present research and analysis on China's growing food imports, rural food consumption, and macroeconomy.

WTO and Regional Trade Agreement Negotiations. Developing countries are playing a critical role in global trade negotiations, and two ERS publications in 2005 cover WTO activities targeted at developing countries. *Agricultural Trade Preferences and the Developing Countries* provides results of a study on

nonreciprocal trade preference programs that originated in the 1970s as an effort by high-income developed countries to provide tariff concessions to low-income countries. The study focuses on the United States and European Union and finds that the programs offer significant benefits for some countries, mostly the higher income developing countries. *The Forces Shaping World Cotton Consumption After the Multifiber Arrangement* analyzes how the phaseout of the Multifiber Arrangement (MFA) and other factors, including economic expansion in Asia, are affecting global textile and cotton markets. In the long run, income growth and technical change have more of an effect on world cotton consumption than the elimination of the MFA. In addition to published reports, ERS continues to provide economic analysis of specific issues related to both the WTO and several regional trade agreements directly to agricultural trade negotiators at the Foreign Agricultural Service and the Office of the U.S. Trade Representative.

Specific activities to move the program toward the desired goal

ERS will identify key economic issues related to the international competitiveness of U.S. agriculture. ERS also will use sound analytical techniques to understand the immediate and broader economic and social consequences of alternative policies and programs and the effects of changing macroeconomic and market conditions on U.S. competitiveness. ERS will effectively communicate research results to policymakers, program managers, and those shaping the public debate on U.S. agricultural competitiveness.

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policymakers and decision makers. These activities, based on the USDA objectives of this strategic goal, will include conducting research to fully comprehend and articulate the effects of trade agreements, political and economic structural changes, and technological developments on the international comparative and competitive advantage of U.S. agriculture.

ERS plans a range of activities to provide policymakers and other decision makers with assessments of current programs and alternative outcomes for pending or prospective policy decisions. Results will help shape the public debate on economic and trade policy issues affecting the food and agricultural sector. These activities will include the following:

International Trade Agreements Negotiation. Enhancing the ERS capacity to support analyses of issues related to World Trade Organization negotiations on agriculture under the Doha Development Agenda is an analytic priority over the next 2 years. The primary focus of the project activities identified is to build analytic capacity in anticipation of critical questions and issues arising from the ongoing negotiations on agriculture, rather than on producing published reports. Specific projects include expanding and updating databases to analyze market access provisions, including publishing an overview of the updated information.

China, Brazil, and India. China, Brazil, and India represent three countries that will shape global agricultural markets of the 21st century and where large uncertainties exist about future demand, supply, and policy directions. In collaboration with the Foreign Agricultural Service and with funding from the Emerging Markets Program, ERS is analyzing key markets and policy issues that will shape the size and pattern of the three countries' agricultural trade, with a focus on major U.S. agricultural exports and imports. While specific issues vary across the three countries, common themes include negotiation and implementation of trade agreements, changes in consumer demand for food, and the factors that influence these changes, including the declining role of subsistence farming, effects of urbanization, the rising demand for convenience, and resource availability, including crop land and water.

Macroeconomic Linkages to Agriculture. Changes in the macroeconomy have major effects on agriculture. The main factors linking the macroeconomy to agriculture are exchange rates, consumer income, rural employment, and interest rates. International and domestic macroeconomic shocks can cause major changes in the values of these variables, resulting in changes in a country's agricultural prices, production, consumption, and trade. Ongoing ERS research focuses on the factors that explain the declining agricultural trade balance and exchange rate effects on agriculture.

Goal 2: Enhance the Competitiveness and Sustainability of Rural and Farm Economies

Project Statement							
(On basis of appropriation)							
	2005 Actual		2006 Budget		2007 Estimated		
	<u>Amount</u>	<u>Staff Years</u>	<u>Amount</u>	<u>Staff Years</u>	<u>Increase or Decrease</u>	<u>Amount</u>	<u>Staff Years</u>
Goal 2:	\$25,791,866	146	\$26,181,000	149	\$1,789,000	\$27,970,000	149

ERS research and analysis provides insight into market conditions facing U.S. agriculture, avenues for innovation, and market expansion. In addition, the ERS program identifies and analyzes market structure and technological developments that affect efficiency and profitability. The program also includes research and analysis to help farmers and ranchers manage risk. ERS monitors the structure and performance of the food marketing system (food manufacturing, wholesaling, retailing, and service), both as to how efficiently the system performs its role and, in the consumer-driven agricultural economy, how effectively it conveys market signals from consumers.

The research program emphasizes the economic and financial structure, performance, and viability of the farm sector and of different types of farms, the state of global food security, and technological innovation. For example, ERS created a patent database for agricultural biotechnology that will provide answers to some basic questions about innovations in this area, such as who is patenting and licensing what technologies. This research will help policymakers assess policy issues on innovation and the potential effects of concentration on research and market power in the agricultural inputs industry.

Selected Examples of Recent Progress:

Market Analysis and Outlook. ERS continues to work closely with the World Agricultural Outlook Board (WAOB) and other USDA agencies to provide short- and long-term projections of U.S. and world agricultural production, consumption, and trade. Several initiatives have increased the transparency and accessibility of the data and analysis. One initiative that increased transparency was the documentation of business rules and models used in the forecasting process. The documentation is illustrated the report, *Forecasting the Counter-Cyclical Payment Rate for U.S. Corn: An Application of the Futures Price Forecasting Model*, and an associated data product that covers three major field crops: corn, soybeans, and wheat. Another initiative documented key aspects of wheat market analysis.

Assessment of Agricultural Policy. ERS assesses the effects of farm policy on the food and agricultural sector. A long-term perspective on forces that have shaped agricultural and rural life as well as a review of some key developments in farm policy are juxtaposed in a report, *"The 20th Century Transformation of U.S. Agriculture and Farm Policy."* The report also considers the extent to which farm policy design has (or has not) kept pace with the continuing transformation of American agriculture.

ERS has also completed research on more recent changes to farm programs in the 1996 and 2002 Farm Act. The report, *Economic Analysis of Base Acre and Payment Yield Designations Under the 2002 U.S. Farm Act*, presents the results of a study on how farmland owners responded to the opportunity to update commodity program base acres and program yields that are used for calculating selected program benefits. Results suggest that landowners selected the options that resulted in the greatest expected flow of program payments, as opposed to aligning base acres to current or recent plantings. Another report, *Decoupled Payments in a Changing Policy Setting*, provides new findings that build on research published in 2003 on the Production Flexibility Contracts program from 1996 to 2002. The study draws on farm household data from the Agricultural Resource Management Survey (ARMS) and considers the effects of decoupled payments on recipient households, assessing land, labor, risk management, and capital market conditions that can lead to links between decoupled payments and production choices.

Marketing of Organic Foods. Organic farming has become one of the fastest growing segments of U.S. agriculture during the 1990's and 2000's. U.S. producers are turning to organic farming systems as a potential way to lower input costs, decrease reliance on nonrenewable resources, capture high-value markets and premium prices, and boost farm income. In the ERS report, *Price Premiums Hold on as U.S. Organic Produce Market Expands*, analysts explain that relative changes in supply and demand will help determine whether price premiums and higher profitability will continue for organic farmers and businesses. Fresh produce has long been an important component of the organic food sector and a significant contributor to the organic industry's growth over the last decade. In a second report on the competitiveness of the organic food industry, ERS compares the U.S. and the European Union's (EU) government policies on the organic industry and the growth of the organic markets in the two regions. The EU actively promotes sector growth via conversion subsidies and direct payments to farmers, while the U.S. largely takes a free-market approach, with policies that focus on facilitating market development. The retail market for organic products in Europe (almost \$13 billion) is somewhat larger than in the United States (\$10.3 billion), but the U.S. market is growing at a faster rate.

Impact of the Livestock Mandatory Reporting Act. In 1999, Congress passed the Livestock Mandatory Reporting Act (LMR), which led to a major redesign of the livestock price reporting system. With the legislation expiring in fall 2005, stakeholders can benefit from an investigation of developments leading up to the Act and an assessment of the Act's impact on cattle markets after its implementation. The ERS report, *Did the Mandatory Requirement Aid the Market?*, found that, by early 2002, the program was capturing more than 90 percent of commercial cattle slaughter compared with less than 60 percent in the last days of the voluntary system. Many producers initially expressed disappointment with LMR, indicating in a survey that the program was not as beneficial as expected because the data did not show that contract prices were higher. But producers now appear to be using the cash market more: After 2002, cattle sales shifted away from formula pricing and contracts and toward negotiated, cash market transactions. While that shift may have been driven by other market developments—such as low inventories and strong demand—that raised all cattle prices, it also may have been affected by expanded and more transparent price reporting under LMR.

Strengthening Access to ARMS. Agricultural Resource Management Survey (ARMS) data, USDA's annual, national survey of farms, is the primary source of information about the financial condition, production practices, use of resources, and economic well-being of America's farmers and farm households. ARMS provides a powerful data source to provide direct answers to key questions from USDA policy officials, Congress, and other decisionmakers within and outside the Federal Government about the different impacts of alternative policies and programs across the farm sector and among farm families.

ERS and the National Agricultural Statistics Service (NASS) continued expanding access to ARMS through outreach activities to researchers across U.S. universities and staff at USDA agencies. An increased sample starting in 2004 allows ARMS survey information about farm production, business, and households to include detailed data for 15 top farming States. In 2004, ERS and NASS greatly improved access to summarized ARMS data through a dynamic, technologically advanced, and easy to use web-based delivery tool. This tool has a public side and a side for registered users, each returning tailor-made tables and graphs. Users can select among survey data sets to build custom reports, refine queries with specific samples/populations, and group summary statistics for comparisons. Advanced statistical analysis is available to registered users for additional statistical analysis and economic modeling. This part of the tool includes the fullest detail and range of variables, enhanced flexibility, a regression (and soon multivariate analysis) tool, and the ability to create classifications. Analysis of ARMS data is no longer physically limited to USDA facilities.

Food Dynamics. In September 2005, ERS published *Food Dynamics*, which provides timely, critical information on recent food market gainers and losers and identifies major food products with large swings in sales volume, prices, or quantities. In addition, the report compares and contrasts actual consumer purchases before and after the new *Dietary Guidelines for Americans* was released in January 2005.

Diverse Labor Force Attracts New Food Processing Plants. As the manufacturing sector's share of total U.S. employment continues its historic decline, rural areas face increasingly stiff competition—from both urban and rural areas—in attracting new manufacturing plants. Thus, rural county economic planners have a keen interest in the traits of counties that have successfully attracted new manufacturing plant investment. Preliminary ERS research shows that the diversity of the labor force, whether measured by income, educational attainment, or occupation, was associated with a higher likelihood of a county's being chosen as a site for new food processing plants. This finding was true for all counties—urban, suburban, or rural. While true for all counties, the typically more diverse urban and suburban labor forces favor nonrural counties.

Pork Quality and the Role of Market Organization. Changes in the organization of the U.S. pork industry, most notably marketing contracts between packers and producers, have influenced pork quality. A number of developments have brought quality concerns to the forefront. These developments include health concerns and corresponding preferences for lean pork, growing incidence of undesirable quality attributes (e.g., pale, soft, and exudative (PSE) meat, a result of breeding for leanness), heightened concerns over food safety and related regulatory programs, and expansion into global markets. ERS found that organizational arrangements can facilitate industry efforts to address pork quality needs by reducing measuring costs, controlling quality attributes that are difficult to measure, facilitating adaptations to changing quality standards, and reducing transaction costs associated with relationship-specific investments in branding programs.

Agricultural Biotechnology Patent Database. In summer 2004, ERS released a database of agricultural biotechnology intellectual property to its website, which provides an unprecedented compilation of information to inform research on agricultural research and development (R&D) and intellectual property. For over 11,000 utility patents issued between 1976 and 2000, the database includes detailed patent ownership histories that allow users to compare R&D across sectors (U.S. and non-U.S., private, nonprofit, and public) and to track patent ownership through an extremely active period of industry mergers and acquisitions in the 1990s. Patents are also categorized into over 60 technology classes and subclasses. The private sector now accounts for a greater share of investment in agricultural R&D than does the public sector, especially in the area of biotechnology. Patenting in agricultural biotechnology has outpaced the overall upward trend in U.S. patents. Commercial firms account for the largest number

of U.S. agricultural biotechnology patents. Database ownership information shows that concentration in ownership of agricultural biotechnology patents has increased since 1995, a result that is clear only after accounting for industry mergers and acquisitions. By 2002, fully 95 percent of patents originally held by seed or small agbiotech firms had been acquired by large chemical or multinational corporations. Private firms, universities, and the Federal Government hold different portfolios of patents by technological class, reflecting differences in motivations for patenting. Future work will analyze proprietary knowledge flows in agricultural biotechnology and the use of alternative forms of intellectual property, over time, for the protection of different types of crop varieties.

Economic Aspects of Genetic Resource Management. A study on use of the National Plant Germplasm System (NPGS) found strong demand for public plant genetic resources (PGR), which are a critical input in the research and development (R&D) process, particularly among developing countries. Use rates are high. Heavy use of the NPGS by public breeders, basic researchers, and developing countries suggests limited prospects for commercial returns from many users of the systems materials. Thus, funds may be inadequate for benefit-sharing provisions of the new international treaty to govern the exchange of PGR. Increased demand for public PGR is likely. Results of the study were published in an ERS report, *Crop Genetic Resource: An Economic Appraisal*. The report includes an appraisal of general economic aspects of PGR management and use, including valuation, the role of diversity, and the international exchange of these resources.

Expanded ARMS Database Aids Enhanced Farm Income Forecasts. USDA doubled the survey sample size of the Agricultural Resource Management Survey (ARMS), which now allows farm and household income estimates to be generated for 15 agricultural States, from 18,000 to 36,000 between 2002 and 2003. The average farm's net household income in 2004 is expected to be \$70,675, a 3-percent rise over that of 2003. The largest increase will be for commercial farms, with farm rather than off-farm income contributing the largest portion of the anticipated increase. Net value added and net farm income in 2004 are expected to reach record levels, with \$118.9 billion in net value added and \$73.7 billion in net farm income, both large increases (17 percent and 24.5 percent, respectively) over 2003 levels.

ARMS data are used to forecast farm income growth. An initial forecast of U.S. farm sector income and balance sheet in calendar year 2004 was released in February and presented at the USDA Agricultural Outlook Forum. The effects of the existing farm legislation were analyzed and forecast by program. Updated income and balance sheet forecasts were released in August and November, reflecting production, prices, and quantities for crops, livestock, and livestock products from the World Board and ERS.

USDA provided forecasts and additional disaggregated value-added and farm income accounts to the National Income Staff, Bureau of Economic Analysis (BEA), for review and incorporation into their Gross National Product and National Income Accounts and into their estimates of Personal Income and Outlays and Corporate Profits. USDA also provided estimates to the Council of Economic Advisors, plus additional annualized quarterly estimates of components of the value-added and farm income accounts for the 2004 calendar year.

USDA produced and released the complete set of State financial accounts for 2003d. USDA provided estimates of State income accounts to BEA's Regional Economic Measurement Division to use in developing regional economic indicators to determine the dissemination of Federal Revenue Sharing funds.

Agricultural Contracting and the Scale of Production. Changes in U.S. farm structure can have wide-ranging impacts on the distribution of benefits from government programs and on the sector's responses to demand and supply shocks and to policy initiatives. While several major, long-term, and familiar trends have characterized structural change in farming since the 1930's, the last two decades have witnessed an important evolution in the nature of such change. ERS work on this topic details recent changes in farm structure, explains what's new, and ties the shifts to farm organization, commodity choices, and business practices. The growth of contracting has important implications for the structure of the farm sector. An ERS study presents evidence that contracting is positively associated with the scale of production—that is, contract production tends to be at a larger scale than is independent production, and larger scale producers are more likely to contract than are smaller scale producers. This relationship is most striking in the cattle and hog sectors, where contract producers operate at a much larger scale than do independent producers even when considering only large scale commercial operations. The study also presents six possible explanations for the observed correlation between scale and contracting and uses information from five annual national surveys as evidence for or against the proposed mechanisms.

Specific activities to move the program toward the desired goal

ERS research and analytical activities are designed to enhance policymakers' and other decision makers' understanding of economic issues affecting the U.S. food and agriculture sector's competitiveness, expand domestic marketing opportunities, enhance agricultural production efficiency, and improve effective risk management. These activities support achievement of USDA Goal 2, "Enhance the competitiveness and sustainability of rural and farm economies."

ERS will identify key economic issues related to the competitiveness of U.S. agriculture. ERS also will use sound analytical techniques to understand the immediate and broader economic and social consequences of alternative policies and programs and the effects of changing macroeconomic and market conditions on U.S. competitiveness and sustainability of rural and farm economies. ERS will effectively communicate research results to policymakers, program managers, and those shaping the public debate on the U.S. farm economy. These activities will include the following:

- Researching and disseminating economic intelligence about the structure of, performance in, information systems of, new technology in, and foreign direct investment in the U.S. food manufacturing, processing, wholesale, retail, and foodservice industries.
- Conducting economic research on and ascertaining the impacts on commodity markets of new food and nonfood uses, new agricultural and forest products, new food products, alternative fuels, and new processes and other technologies that add value.
- Providing timely, accurate agricultural economic analysis and data on the impacts of decisions in risky situations to help farmers and ranchers make more informed production and marketing decisions.

ERS plans a range of activities to provide policymakers and other decision makers with assessments of current programs and alternative outcomes for pending or prospective policy decisions. Results will help shape the public debate on commodity, technological, economic, and trade issues. These activities will include the following:

Assessment of Agricultural Policy. ERS is investigating the impacts of agricultural policy on commodity markets, prices, and farm income; linkages between the farm sector and the rural economy; and farm household financial well-being. Because each commodity sector, region or country, and farm household faces unique conditions, ERS is also researching the response of these groups to fundamental adjustments in farm policy and other factors shaping change in the agricultural sector. ERS will continue to develop a

new modeling framework that brings household data (from the Agricultural Resource Management Survey) into a computable general equilibrium framework that may be better able to model decisionmaking than current commodity market models.

Market Analysis and Outlook. ERS will continue to work closely with the World Agricultural Outlook Board and USDA agencies to provide short- and long-term projections of U.S. and world agricultural production, consumption, and trade. Several initiatives will increase the quality, transparency, and accessibility of the data and analysis. An ongoing initiative seeks to provide users with more options in the delivery of timely data, such as a queriable format and a variety of output formats. Another initiative, in collaboration with the University of Minnesota and private industry, will revise existing conversion factors for livestock and crops (e.g., how much beef and pork are used in sausages, how much of different types of wheat are used in breakfast cereals, etc.).

Coordination Issues in the U.S. Beef Industry. While many structural changes are underway in the U.S. beef industry, these developments are very different than those in the other meat industries. Traditionally the fresh beef market has been characterized by undifferentiated beef products. Emerging technologies and marketing practices appear to be providing beef marketers with new opportunities to differentiate their beef products. This ongoing study will provide insight into changing marketing practices, including those that may facilitate production of differentiated products.

Agricultural Resource Management Survey (ARMS). This annual survey is USDA's primary source of information on the financial condition, production practices, resource use, and economic well-being of America's farm households. A 2005 pilot survey of wheat farmers combined Natural Resources Conservation Service's Conservation Effects Assessment Project (CEAP) survey with the ARMS survey. This combination promises to link environmental issues with farm operation and household decisions. The 2006 pilot survey will include corn operations. USDA will conduct its first-ever survey of organic dairy operation practices and finances in 2006. ERS will estimate national and regional estimates of organic milk costs of production.

Food Market Surveillance. USDA's policy officials address the effects of unforeseen and anticipated developments in food and agricultural markets. During high-profile events, such as a food safety outbreaks, access to up-to-the-minute data and information is particularly critical. Such information is used routinely by food industry. To fill this information gap, ERS will establish a Monitoring Report to provide timely and critical information on most recent market gainers and losers to identify major food products with large swings in sales volume, prices, or quantities. In addition, this report will compare and contrast actual purchases of consumers before and after important events. Further, ERS is developing a Rapid Consumer Response Module to quickly gauge consumers' attitudes and intentions in response to events such as the release of the new dietary guidelines, mercury standards for fish, country-of-origin labeling, price or supply shocks, and unforeseen food safety incidents.

Goal 3: Support Increased Economic Opportunities and Improved Quality of Life in Rural America

<u>Project Statement</u>							
(On basis of appropriation)							
	2005 Actual		2006 Budget		2007 Estimated		
	<u>Amount</u>	<u>Staff Years</u>	<u>Amount</u>	<u>Staff Years</u>	<u>Increase or Decrease</u>	<u>Amount</u>	<u>Staff Years</u>
Goal 3:	\$5,099,973.	39	\$5,130,000	40	\$3,354,000	\$8,484,000.	41

ERS research explores how investments in rural people, business, and communities affect the capacity of rural economies to prosper in the new and changing global marketplace. The Agency analyzes how demographic trends, employment opportunities and job training, Federal policies, and public investment in infrastructure and technology enhance economic opportunity and quality of life for rural Americans. Equally important is our commitment to help enhance the quality of life for the Nation's small farmers who increasingly depend on these rural economies for employment and economic support.

ERS continues to monitor changing economic and demographic trends in rural America, particularly the implications of these changes for the employment, education, income, and housing patterns of low-income rural populations. ERS uses the most up-to-date information on conditions and trends affecting rural areas and provides the factual base for rural development program initiatives. The rural development process is complex and sensitive to a wide range of factors that, to a large extent, are unique to each rural community. Nonetheless, ERS assesses general approaches to development to determine when, where, and under what circumstances rural development strategies will be most successful.

Selected Examples of Recent Progress:

Changing Population of Rural America: Policy Implications for a New Century. Using 2000 Census data, ERS is at the forefront of demographic and economic rural analysis. ERS research helps to frame rural development policy at the national and regional levels by explaining the changing nature of economic opportunity in rural America and its implications for the well being of rural people and their communities. ERS research in this area is designed to provide Federal, State, and local policymakers with sound empirical analysis to develop strategies to enhance the social and economic opportunities of rural Americans. This work focuses on the determinants and consequences of four critical themes in contemporary rural America: changing population composition, industrial restructuring, changing land use patterns, and rural diversity of needs. An April 2005 *Amber Waves* article highlights the policy implications from the report, noting that the diversity within rural America dictates that strategies tailored to particular types of rural economies may be more effective than a broader "one size fits all" rural policy.

New Patterns of Hispanic Settlement in Rural America. ERS analysis shows that, since 1980, the nonmetro U.S. Hispanic population has doubled and is now the most rapidly growing demographic group in rural and small-town America. By 2000, half of all nonmetro Hispanics lived outside traditional settlement areas of the Southwest. Many Hispanics in counties with rapid Hispanic growth are recent U.S. arrivals with relatively low education levels, weak English proficiency, and undocumented status. This recent settlement has increased the visibility of Hispanics in many regions of rural America, where population has long been dominated by non-Hispanic Whites. Yet within smaller geographic areas, the level of residential separation between these groups increased—the two groups became less evenly distributed—during the 1990s, especially in rapidly growing counties. Hispanic settlement patterns

warrant attention by policymakers because the patterns affect the well-being of both Hispanics and rural communities.

The Impact of Recreation and Tourism on Rural Economies. Many rural communities use recreation and tourism as a means to offset the decline in traditional employment opportunities and to stimulate local development. While it is generally agreed that recreation and tourism contribute to population and employment growth, the low-skill and part-time jobs associated with the industry raise questions about its contribution to local economic and community well-being. This study estimated the local economic and community impacts of recreation and tourism development in rural America. Economic impacts include local poverty, per capita income, employment growth, earnings per job and per employee, unemployment rates, and employment/population ratios. Community impacts include local government taxes and spending on public services, crime rates, educational attainment, and the diversity of private goods and services available in the community. Study findings are consistent with claims that tourism and recreational development contribute to rural well-being by increasing local employment, income, and wage levels and by improving social conditions, such as poverty, education, and health. But recreation and tourism development is not without drawbacks, such as higher housing costs. Local conditions also vary significantly, depending on the type of recreation area.

Low-Skill Employment and the Changing Economy of Rural America. Rising job skill requirements are widely considered an important indicator of local economic development and improved labor force outcomes. Rural jobs have generally followed the national pattern of rising skills, but this rise often lags the changes in urban areas. A recent ERS study analyzed trends in rural low-skill employment in the 1990s and identified the industrial and occupational components of this change. Research findings show that, although low-skill jobs are disproportionately found in rural areas, the rate of decline in the share of low-skill jobs was swifter in rural areas in the 1990s than in urban areas. Upgrading skills within the current mix of industries—rather than growth of new industries—was a key factor in the declining share of rural low-skill jobs. Women and African-Americans were most likely to see declines in the likelihood of low-skill employment; Hispanics actually experienced a small increase. For all major groups of workers, declining low-skill employment was generally associated with higher earnings. The findings suggest that investment in education and training, rather than industrial targeting, will be a more effective approach to raising skill levels in the rural economy.

Trade and Rural Areas. American farmers produce raw farm products well in excess of domestic demand. Because processing these excess products could yield additional income and jobs, rural planners have viewed the food export market as a potential base for rural development. Despite its logical appeal, demonstrating the strength of this potential development effect for rural areas has been difficult. An ERS study of the growth in U.S. meat exports in the last two decades suggests reasons for this difficulty. The researchers show that, while the U.S. had long had an apparent comparative advantage in meat production, the growth in meat exports resulted from a combination of changes that affected the cost of production and the demand for meat, as well as changes resulting from public policy. Most, if not all, of these changes were outside the control of rural development policymakers.

Specific activities to move the program toward the desired goal

ERS research and analytical activities are designed to enhance understanding by policymakers, regulators, program managers, and organizations that shape public debate of economic issues affecting rural development. The issues include factors related to farm finances and investments in rural people, businesses, and communities. The activities are also designed to enhance understanding of economic issues related to the performance of all sizes of American farms. These activities support achievement of

USDA Goal 3, “Support Increased Economic Opportunities and Improved Quality of Life in Rural America.”

ERS will identify key economic issues related to rural economic development and farm viability. ERS also will use sound analytical techniques to understand the immediate and broader economic and social consequences of how alternative policies and programs and changing market conditions affect rural and farm economies. ERS will effectively communicate research results to policymakers, program managers, and those shaping the public debate on rural economic conditions and performance of all sizes and types of farms. Examples of these activities will include the following:

- Developing a comprehensive, integrated base of information on rural economic and social conditions that can be used by Federal policymakers for strategic planning, policy development, and program assessment.
- Analyzing how investment, technology, employment opportunities and job training, Federal policies, and demographic trends affect rural America’s capacity to prosper in the global marketplace.
- Expanding research to assess the effectiveness of developing profitable alternative crops and on- or near-farm processing that add value to agricultural products and enhance the economic viability of rural communities and families.
- Conducting research to identify social and economic issues facing rural communities as they adjust to broad forces affecting their futures, such as changing farm policy, welfare reform, increased foreign competition in low-wage industries, growing demand for highly skilled labor, an aging population, and rapid growth in communities near major cities.
- Conducting research to better understand the role and effectiveness of investments in infrastructure, housing, and business assistance for sustaining rural communities, particularly in areas with rapid population growth or long-term population decline.

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policymakers and decision makers. These activities will include the following:

Education and Rural Economic Development. The *No Child Left Behind Act of 2002* created a new era of greater school accountability to ensure that our public schools adequately prepare students for the increasingly high-skill “new economy” in which we now live. Many States have already initiated a series of education policy reforms, including test-based school assessment, school restructuring, and statewide funding equalization. However, rural schools and communities present a distinctive set of challenges to education reform. Researchers will analyze the impact of recent changes in educational policy on rural schools’ capacity to provide a high-quality education and to serve as an engine for local economic development activities. The study will assess the effects of school quality on individual outcomes, such as achievement, attainment, and earnings, and identify major educational factors that contribute to local development efforts. The goal is to determine the relationship between education and economic outcomes, both for the individual worker and rural community, to help local communities better target their economic development and school improvement efforts.

Agriculture, Farm Policy, and Rural Development A critical gap in our current policy research is the lack of information on the linkages among farm policy, farm households, and the rural economy. This information is necessary to determine whether current policies and economic strategies are effectively targeting the needs of an evolving farm and rural economy. In 2005, the National Center for Food and Agricultural Policy and ERS held a workshop to assess the implications of changing farm policy for rural

areas and to stimulate new thinking that contributes to the ongoing policy debate well in advance of the next farm bill. The workshop identified the current challenges of farm policy in rural areas and explored several alternative approaches. ERS analysis will supplement findings from the workshop by assessing the effects of farm policy on rural population change as well as by drawing insights from current farm policy reform in the European Union.

Assessing Effective Rural Development Strategies. Rural communities have changed dramatically since 1990 due to increased population from urban areas, shifts in age and ethnic composition, and economic and industrial restructuring. Increasing competition from abroad and sectoral shifts in employment present new challenges and opportunities in the world economy and raise the question, how can rural communities successfully build on their economic base and other assets to retain and attract population and employment? And, when, where, and under what circumstances will rural development strategies be most successful? Researchers will empirically assess the effectiveness of several rural development strategies—including value-added farm production; human capital development; recreation, tourism, and amenities; and infrastructure improvements—for improving the economic opportunities and well being of rural residents.

Enhancing Home Ownership—Targeting Areas of Need. ERS is working with Rural Housing Service (RHS) staff to help redefine the rural eligibility criteria used in RHS programs, such as the Single Family Direct Program, Guaranteed Loan Program, and Multifamily Rural Housing Program. The study will identify several alternative measures of rurality and will assess the implications of new eligibility criteria on program participation. In addition, ERS analysis will focus on determinants and consequences of housing stress in rural America, drawing on the newly developed housing-stressed county type developed by ERS in 2004. This analysis will provide information to RHS that can be used in targeting areas of need for the Single Family Direct and Guaranteed Loan Housing Programs that encourage home ownership.

Goal 4: Enhance Protection and Safety of the Nation’s Agriculture and Food Supply

<u>Project Statement</u>							
(On basis of appropriation)							
	2005 Actual		2006 Budget		2007 Estimated		
	<u>Amount</u>	<u>Staff Years</u>	<u>Amount</u>	<u>Staff Years</u>	<u>Increase or Decrease</u>	<u>Amount</u>	<u>Staff Years</u>
Goal 4:	\$6,137,968	24	\$6,129,000	26	\$78,000	\$6,207,000	26

ERS food safety research focuses on enhancing methodologies for valuing societal benefits associated with reducing food safety risks, understanding consumer willingness to pay for safer food, assessing industry incentives to enhance food safety through new technologies and supply chain linkages, and evaluating regulatory options and change. ERS is working with economists at USDA’s Food Safety and Inspection Service to answer certain practical economic questions that arise in the design and implementation of food safety performance standards for meat and poultry.

ERS research is designed to support food safety decisionmaking in the public sector and to enhance the efficiency and effectiveness of public food safety policies and programs. The program focuses on valuing societal benefits of reducing and preventing illnesses caused by microbial pathogens; assessing the costs of alternative food safety policies; studying industry’s incentives, through private market forces and

government regulation, to adopt food safety innovations; and analyzing consumer demand for food safety and the roles of consumer information, attitudes, and behaviors.

The Geo-Spatial Economic Analysis (GSEA) team builds on earlier ERS homeland security programs (SAS-USA) and ERS's economic, data, and geographic information systems (GIS) capabilities to analyze the economic effects of enhanced security and the potential impacts of accidental or intentional problems in the Nation's agricultural and food sectors. GSEA uses current data and information about the U.S. agricultural and food systems, including resource use, production, processing, distribution, and consumption enhanced by GIS.

Selected Examples of Recent Progress:

Program of Research on the Economics of Invasive Species Management (PREISM). PREISM funded, through a peer-reviewed, competitive process, 12 multi-year agreements at a cost of \$1.4 million in fiscal year (FY) 2003 and \$1.2 million in FY 2004. FY 2003 and 2004 recipients of PREISM funding participated in several workshops to share their research findings with staff from ERS, USDA's Animal and Plant Health Inspection Service (APHIS), and other Federal agencies that manage invasive species. The priority research areas of PREISM, identified by ERS, in consultation with APHIS and other USDA agencies and offices with programs related to invasive species, cover: (1) the economics of trade and invasive species, (2) bioeconomic risk assessments, (3) implications of alternative approaches to invasive pest exclusion, surveillance, and management, and (4) decision tools for invasive species management. Research stemming from this effort resulted in critical analysis of the economic and policy implications of soybean rust and the almost immediate release of website information on these matters very soon after the detection of soybean rust in the U.S.

Food Safety Innovation in the United States: Evidence from the Meat Industry. A goal of food safety regulation is to increase food safety by establishing incentives for firms to invest in efficient food safety innovations. ERS researchers led an investigation into food safety incentives in the U.S. meat industry, with the objective of identifying the types of incentives that have stimulated food safety investments in the sector. The study built on results from an ERS survey of U.S. meat and poultry slaughter and processing plants and two case studies of innovation in the U.S. beef industry. Findings from this work, which were released in 2004, highlight a number of successful mechanisms for stimulating investment in food safety. Findings published in 2005 focus on the effect that improved information about pathogen control is having on private and public food safety strategies.

Food Safety and Trade: Regulations, Risks, and Reconciliation. Differences in food safety regulations and standards among importing and exporting countries can cause friction and even disputes that impede international food trade. In 2004, ERS released a report examining the conceptual relationships between food safety and international trade and analyzing empirical examples from the meat and poultry, produce, food and animal feed crop, and seafood sectors. ERS researchers found that countries are narrowing regulatory differences by learning from each others' successes in managing food safety, collaborating to adopt common or international standards set by a third party, or reaching compromises on conflicting standards. Private food safety initiatives, such as voluntary quality assurance schemes, are also contributing to the resolution of differences across borders. Findings in 2005 focus on the mixed influence of globalizations of the food supply on the level and distribution of pathogen contamination and foodborne illness.

Societal Costs of Foodborne Illness. ERS has become well known for pioneering estimates of the societal costs of foodborne illnesses from *Salmonella* and other foodborne pathogens. In 2005, ERS researchers completed an update of the cost of foodborne illness from *Escherichia coli* O157 (O157 STEC) using the

Centers for Disease Control and Prevention (CDC) estimate of annual cases and newly available data from the Foodborne Diseases Active Surveillance Network (FoodNet) of CDC's Emerging Infections Program. ERS estimates that the annual cost of illness from *E. coli* O157 was \$406 million in 2003, including \$370 million for premature deaths, \$31 million for medical care, and \$5 million in lost productivity.

The Foodborne Illness Cost Calculator. ERS has an important role in estimating and disseminating information about the economic costs of foodborne illness. The Foodborne Illness Cost Calculator details the assumptions behind the ERS cost estimates for a number of foodborne pathogens and describes how ERS analysts estimate medical costs, productivity losses, and costs of premature death for each pathogen. Users can choose among a variety of alternative assumptions, including assumptions used by the Food and Drug Administration and the Environmental Protection Agency in their foodborne illness cost estimates, to create their own cost estimates for each pathogen. The Calculator for *Salmonella* was put on the web in April 2003 and *E. coli* in 2005.

Valuation Methods for Reducing Foodborne Risks. This project applies state-of-the-art valuation methodologies to measure the benefits of improving food safety. Two surveys were administered to panels of consumers through the internet. Results were used to test different approaches to estimate consumer willingness to pay for foods with lower risk of illness from foodborne pathogens. A contingent valuation survey in summer 2004 presented respondents with information on duration and severity of foodborne illness and asked respondents how much they are willing to pay for a food with lower risk of foodborne illness. The survey results show that willingness to pay to reduce the risk of foodborne illness increases with the duration and severity of the symptoms of the potential illness and with the magnitude of risk reduction. It also suggests that willingness to pay depends on the type of food presenting the risk, with higher estimated willingness to pay to reduce a risk of illness associated with chicken than with ground beef or packaged deli meat. A summer 2005 survey provided respondents with information about the likelihood of foodborne illnesses and asked them about their food consumption and food safety practices. Analysts linked food choices with the information provided using grocery store receipts submitted by respondents.

Performance Standards for Food Safety. A central issue for the U.S. food safety system is the appropriate role for performance versus process standards in enhancing food safety. Performance standards require that a product meet a certain level of safety, but they do not specify the production method. Economists typically argue that performance standards are preferable to process standards because they encourage efficiency and innovation and, as a result, should play a larger role in the Nation's food safety system. The objective of this research area was to investigate the economic theory behind economists' endorsement of performance standards, the practical issues that may complicate the application of performance standards for food safety, and the costs and benefits of alternative approaches to designing food safety standards. Results indicate that recent advances in testing technology provide greater specificity, shorter time to result, greater ease of use, and lower costs than in the past. These newer methods make it easier for regulators to specify performance standards because monitoring is more accurate and less costly.

Geo-Spatial Economic Analysis (GSEA). ERS-GSEA contributed to a number of Homeland Security exercises, including the June 2005 Pinnacle exercise, by estimating potential economic damages of security threats and comparing alternative mitigation responses. The ERS-GSEA team has enhanced its ability to analyze security threat scenarios based on the Agency's commodity market expertise and through collaborations with other USDA agencies and selected Department of Homeland Security and Food and Drug Administration efforts. An economic assessment of alternative animal disease control

strategies is also underway between the Animal and Plant Health Inspection Service, Lawrence Livermore National Laboratory, and ERS. The project compares the economic consequences of alternative control strategies for foot and mouth disease and uses those results to shape the features needed in a decision support system that could be used during disease outbreaks. This project uses APHIS data, along with epidemiological spread model results, to examine the economic consequences derived from ERS economic models using the GSEA-Geospatial Information System (GIS) platform. Given the flexibility of the epidemiological, economic and GIS models, the same approach is being used to examine the economic consequences of other significant animal diseases.

Specific activities to move the program toward the desired goal

ERS research and analytical activities are designed to enhance understanding by policymakers and other decision makers of economic issues related to improving the efficiency, efficacy, and equity of public policies and programs aimed at protecting consumers from unsafe food. These activities support achievement of USDA Goal 4, “Enhance Protection and Safety of the Nation’s Agriculture and Food Supply.”

ERS will identify key economic issues related to protecting consumers from unsafe food and the food supply from contamination. ERS also will use sound analytical techniques to understand the immediate and long-term efficiency, efficacy, and equity consequences of alternative policies and programs aimed at ensuring a safe food supply. ERS will effectively communicate research results to policymakers, program managers, and those shaping efforts to protect consumers from unsafe food. Examples of these activities will include the following:

- Conducting food safety economics research, with the goal of providing a science-based approach to valuing food safety risk reduction, assessing industry costs of food safety practices, and understanding the interrelated roles of government policy and market incentives in enhancing food safety.
- Providing the public and decision makers with food safety and biosecurity information through publications, web materials, and briefings that address several economic aspects of food safety, including consumer knowledge and behavior, industry practices, the relationship between international trade and food safety, and government policies and regulations.
- Working with Federal food safety agency partners to evaluate available foodborne illness data related to meat, poultry, and egg products and to develop more accurate measures of the effectiveness of regulatory strategies in reducing preventable foodborne illness.
- Conducting research on consumer awareness of and attitudes toward food safety risks in order to support education and outreach efforts and to improve understanding of the consumer benefits of various regulatory actions.
- Expanding research, modeling, and data sources that aid in analyzing emerging, potentially high-risk threats to public food safety and U.S. agriculture.
- Developing research to better understand the economics of trade and invasive species. In particular, how do policies that reduce risk of exposure to new pests through trade restrictions affect commodity prices and U.S. trade?
- Integrating information from biological, epidemiological, and other sciences into economic models to develop credible and concrete bio-economic risk assessments that will help public agencies allocate resources among programs that exclude, monitor, and control invasive species.
- Assessing policies designed to exclude, monitor, and control invasive pests with regard to the economic efficiency of different prevention and control strategies for invasive species management.

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policymakers and decision makers. These activities will include the following:

Demand Modeling for Homeland Security. ERS is developing the capacity to provide rapid analysis of the effect of shocks to the food or agricultural system on consumer food choices and overall food consumption. ERS economists are often called on to provide analyses of “what-if” scenarios. These scenarios range from the commonplace, such as a slight drop in commodity production due to weather fluctuations, to the improbable, such as widespread crop failure or a terrorist event involving food contamination. Analyses of these what-if scenarios often stop at the production level. ERS is developing a framework for extending these analyses to overall food consumption and nutrition. This framework will incorporate the price and cross-price elasticities and flexibilities from ERS’s U.S. food demand system model and the current consumption and nutrition estimates from the per-capita consumption data. It will give analysts the ability to estimate shifts in demand due to relative price changes—and price changes due to shifts in demand. It will also provide analysts with an immediate accounting of the overall nutritional impact of changes in food availability and consumption patterns.

Updating Societal Costs of Foodborne Illness. ERS estimates of the cost of foodborne illness provide policymakers with a benchmark measure of the benefits of food safety programs. In 2006, ERS will update foodborne illness cost estimates for *Campylobacter* and associated Guillain-Barré Syndrome. *Campylobacter* is the most commonly reported cause of foodborne illness in the United States. Each year, according to data from the Centers for Disease Control and Prevention, it causes around 2 million cases of foodborne illness, 10,000 hospitalizations, and 100 deaths. Campylobacteriosis is generally contracted by handling raw poultry, eating undercooked poultry, or cross-contaminating raw poultry to other foods. Some people ill with campylobacteriosis develop secondary complications like reactive arthritis and Guillain-Barré Syndrome (GBS). GBS is an autoimmune reaction of the body that affects the peripheral nerves and causes weakness, paralysis, and, occasionally, death. New ERS estimates will incorporate new evidence on the extent and severity of campylobacteriosis and foodborne GBS.

Updating the Foodborne Illness Cost Calculator. ERS will continue to support and update the Foodborne Illness Cost Calculator by adding cost estimates and assumptions for *Campylobacter* and associated Guillain-Barré Syndrome. The calculator details the assumptions behind the ERS cost estimates for a number of foodborne pathogens and allows users to change assumptions to create their own cost estimates for each pathogen. The calculator has homeland security applications for assessing costs of potential outbreaks due to intentional acts as well as natural occurrences.

Food Safety and Profitability. Economic theory suggests that market forces should exert pressure on firms to maintain high quality and safety standards: Firms that fail to do so risk “punishment” by the market through reduced sales, loss of reputation, and, possibly, by being forced out of business. ERS is investigating the linkage between food safety performance and long-term profitability by using Food Safety and Inspection Service’s Enhanced Facilities Database (EFD) to evaluate the impact of meat and poultry recalls on establishment survival. This approach has two important advantages over other ways of measuring market effects. First, plant survival is a measure of long-run profitability, allowing measurement of the lasting impact of a meat or poultry recall. Second, the EFD is a comprehensive dataset that includes all meat and poultry plants, including both private and publicly held firms.

The Impact of Market Mechanisms and HACCP Regulation on Food Safety Quality. ERS and Food Safety and Inspection Service (FSIS) researchers are teaming up to examine the economic, regulatory, and technological forces that affect food safety performance, as measured by the number of positive

Salmonella test samples as a share of all samples examined by FSIS. The analysis requires the use of unique datasets from FSIS and ERS. The goal of the project is to inform the regulatory process by identifying the elements that have the biggest impact on safety performance.

Guidelines for Obtaining Food Safety Production Data. To accurately evaluate the impact of food safety regulations on plant operations, analysts rely on plant survey data. ERS researchers aim to develop guidelines for obtaining food safety production data by examining the elements of a highly successful survey conducted by ERS and Washington State University. The survey yielded nearly 1,000 responses from 1,705 possible meat and poultry plants on their costs of compliance with the Pathogen Reduction /Hazard Analysis Critical Control Point rule of 1996, plant characteristics, and use of food safety technologies and practices. The high response rate is attributed to the use of priority mail and an incentive payment of \$5. Letters of support from the major meat and poultry trade associations and the up to five contacts of potential survey respondents by the surveying organization also appear to have improved the response rate.

Product Liability. A number of current policy issues involve programs or business practices designed to redistribute product liability. Examples include contracting arrangements for credence attributes, government policies to certify quality attributes; and traceability systems. One particularly topical issue involves whether USDA and the Food and Drug Administration should be granted mandatory recall authority—as was recommended in a recent study by the Government Accountability Office. Economic theory suggests that shifting recall responsibility from producers to the government could weaken producers' incentives to quickly identify and remove potentially contaminated food from the supply chain. As a result, mandatory recall authority could result in higher levels of foodborne illness than voluntary recall regimes. ERS has three projects planned to help inform this discussion: an empirical investigation of voluntary recall systems; a theoretical analysis of recall policy, including a review of the effectiveness of mandatory recall regimes; and an analysis of the role of insurance companies in controlling and shifting liability.

Traceability for Food Safety and Quality Control. When unsafe food enters the marketplace, public health officials and food safety regulators rely on records maintained by private industry to track the manufacture and distribution of that food. Privately maintained bookkeeping records provide investigators with information on the extent and distribution of contaminated products and on how to efficiently remove such products from distribution channels. The strength of private traceability systems and the readiness of the food industry to efficiently track and recall contaminated products is important for the safety of the Nation's food supply. ERS is working with agricultural economists from universities to investigate firms' formal plans for handling product recalls, the operation of designated recall teams, and the frequency and results of mock recalls. The research will examine the type and scope of information collected from auditing and certification activities, characteristics of firms with recall practices, and the proportion of firms in given sectors participating in auditing and certification activities.

Goal 5: Improve the Nation's Nutrition and Health

<u>Project Statement</u>							
(On basis of appropriation)							
	2005 Actual		2006 Budget		2007 Estimated		
	<u>Amount</u>	<u>Staff Years</u>	<u>Amount</u>	<u>Staff Years</u>	<u>Increase or Decrease</u>	<u>Amount</u>	<u>Staff Years</u>
Goal 5:	\$16,214,916	59	\$16,819,000	61	\$1,729,000	\$18,548,000	61

ERS studies the relationships among the many factors that influence food choices, eating habits, and outcomes. The roles of income, aging, race and ethnicity, household structure, knowledge of diet and health, and nutritional information are of particular interest. Obesity—including understanding its costs to individuals and society, how income and knowledge affect obesity status, and considering private versus public roles in reducing obesity—is an important focus of the current ERS program.

Through the Food Assistance and Nutrition Research Program (FANRP) and by working closely with USDA's Food and Nutrition Service, ERS studies and evaluates the Nation's food and nutrition assistance programs. FANRP research is designed to meet the critical information needs of USDA, Congress, program managers, policy officials, clients, the research community, and the public at large. FANRP research is conducted through internal research at ERS and through a portfolio of external research. Through partnerships with other agencies and organizations, FANRP also enhances national surveys by adding a nutrition and food assistance dimension. FANRP's long-term research themes are dietary and nutritional outcomes, food program targeting and delivery, and program dynamics and administration.

The program provides policymakers, regulators, program managers, and those shaping public debate timely, high-quality analyses and data to enhance understanding of economic issues affecting the nutrition and health of the U.S. population. These issues include factors related to food choices, consumption patterns, food prices, food security, food assistance programs, nutrition education, and food industry structure. Such understanding underpins the capacity to understand and react to issues surrounding obesity, homeland security, and the responsiveness of the food system to consumer demands in a timely, effective manner.

Selected Examples of Recent Progress:

Effects of Food Assistance and Nutrition Programs on Nutrition and Health. Over the past 30 years, a number of studies have tried to quantify various outcomes of USDA's food assistance programs. However, there has been no overall assessment of the effects of the programs on the diet and health outcomes of participants. In response, ERS funded the Nutrition and Health Outcomes Study, which reviewed and synthesized research from over 300 publications on the impact of USDA's food assistance programs on participants' diet and health. The resulting report provides the most comprehensive assessment of published research on the topic. The outcome measures reviewed include household nutrient availability, individual dietary intake (including comparisons to reference standards, such as Recommended Dietary Allowances and the *Dietary Guidelines for Americans*), medical biomarkers of nutrition status, food expenditures, food security, birth outcomes, breastfeeding behaviors, immunization rates, use and cost of health care services, and selected nonhealth outcomes, such as academic achievement and school performance (children) and social isolation (elderly).

The outcomes study concludes that findings on the impact of food assistance program participation on nutrition and health status must be interpreted with caution. Many studies share one or more of three key limitations—inadequate research design, the relative age of the research, and changing standards used to assess dietary intake. Despite these limitations, the review found some consistent impacts of selected food assistance programs across a number of independent studies. For example, research has consistently shown that the Food Stamp Program increases household food expenditures, which may in turn lead to greater availability of certain nutrients at the household level. The literature also strongly suggests that participation in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) raises mean birthweight, and lowers birth-related health care costs. These effects for WIC are likely to be greatest among Blacks and the lowest income women, groups who have the highest incidence of low birthweight.

Nutrition and Health Characteristics of Low-Income Populations. This study examines the nutritional and health status of four population subgroups—participants in the Food Stamp Program, participants in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), school-age children, and older Americans. The study uses data from the Third National Health and Nutrition Examination Survey (NHANES-III). NHANES is the primary source of information for monitoring the Nation’s nutritional and health status. The study was designed to establish a baseline from which to monitor the nutritional and health characteristics of the population group of interest over time and to generate questions and hypotheses for future research. A broad array of measures is used to describe the nutrition and health characteristics of the groups, including dietary intake, body weight, selected nutritional biochemistries, bone density, health-related behaviors, measures of health status, and access to health care.

Children’s Consumption of WIC-Approved Foods. USDA is considering redesigning the food packages provided by the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and ERS has completed several studies to help inform decisions on possible changes to the packages. One ERS study examines how WIC participation affects children’s consumption of WIC-approved foods. The study found that WIC participation increases consumption of at least some types of WIC-approved foods. Although WIC-participating children consumed significantly more calories from WIC-approved foods than did eligible nonparticipants, the difference in total calories consumed was not significant. The results suggest that WIC foods replace non-WIC foods in the diets of children participating in WIC rather than add to their food consumption.

Prices Dominate Interstate Variations in WIC Food Costs. Because food costs account for about 75 percent of total expenditures in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), enacting policies to contain food costs allows States to reduce program expenditures. Understanding what drives WIC food costs helps States implement effective cost-reducing policies. The monthly cost per participant of providing WIC foods varies markedly across the United States. A 17-State study by ERS found that variations in food prices between States affect WIC food costs more than do variations in WIC caseload composition and that identical policies can affect costs differently across States.

Evaluation of the USDA Elderly Nutrition Demonstrations. Policymakers have long been concerned that low-income elderly individuals who are eligible for food stamp benefits participate in the program at a lower rate than other eligible groups. In response to these concerns, USDA funded the Elderly Nutrition Demonstrations—six projects aimed at testing ways to increase participation among eligible elderly individuals. ERS recently funded an evaluation to assess each demonstration’s ability to increase participation among the eligible elderly and identify associated costs. Results of the evaluation suggest

that elderly participation can be increased through a variety of options; however, the costs can be substantial.

Food Stamp Program Entry and Exit. During the 1990's, the Food Stamp Program (FSP) caseload experienced periods of both substantial growth and decline. These increases and decreases in caseload coincided with significant changes in the national economy as well as major changes in FSP policies. Understanding whether caseload trends are driven by changes in entry or exit is important both for judging the success of existing policies and for developing effective policies. A recent ERS report examined patterns of FSP entry and exit and how those patterns contributed to the caseload trends of the 1990's. The report also examined trends in the length of time participants received food stamps and explored how these participation periods varied among different population groups.

Household Food Security in the United States, 2003. Food security is the foundation for a healthy, well-nourished population. Food security for a household means that all household members have access at all times to enough food for an active, healthy life. The annual report, *Household Food Security in the United States*, contributes to the effective operation of USDA's domestic food assistance programs as well as that of private food assistance programs and other government initiatives aimed at reducing food insecurity. The 2003 report, based on data from the December 2003 food security survey, provided the most recent statistics, at the time of publishing, on the food security of U.S. households, how much they spent for food, and the extent to which food-insecure households participated in Federal and community food assistance programs. Results show that 89 percent of American households were food secure throughout the entire year in 2003. The remaining 11.2 percent of households were food insecure at least some time during that year, not statistically different from the 11.1 percent observed in 2002. The prevalence of food insecurity with hunger was unchanged at 3.5 percent.

Understanding the Nation's Food Assistance Programs. Several important studies were completed that provide policymakers, program agencies, and others with information to improve USDA's food assistance programs. For example, USDA is considering redesigning the food packages provided by the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and ERS has completed several studies to help inform decisions on possible changes. The monthly cost per participant of providing WIC foods varies markedly across the United States. A study of this interstate cost variation found that food prices within States affect WIC food package costs more than do variations in WIC caseload composition. Cost-containment practices by State WIC agencies also contribute to interstate variation in WIC food package costs.

Another study examined how WIC participation affects children's consumption of WIC-approved foods. The study concluded that WIC participation increases consumption of at least some types of WIC-approved foods. Policymakers have long been concerned that the low-income elderly eligible for food stamp benefits participate in the program at a lower rate than do other eligible groups. One study evaluated the Elderly Nutrition Pilot Demonstrations operating in six States to identify successful strategies for raising program participation and to identify associated costs. A preliminary analysis of the impact of these demonstrations was completed.

Interest in understanding and improving the nutritional effects of food assistance programs on Indian reservations is widespread. American Indians are more likely than other Americans to be poor, unemployed, food insecure, hungry, obese, and diabetic. Indians living on or near reservations are poorer than Indians living elsewhere and are, therefore, less likely to be able to meet their nutritional needs without Federal assistance. To improve the usefulness and cost-effectiveness of research on food assistance programs, one study reviewed existing data sources and prior research on six USDA programs

that provide food assistance to American Indians living on or near reservations. ERS also continued to publish successive issues of *The Food Assistance Landscape*, a semi-annual periodical that highlights information and research on USDA's food assistance efforts.

Taxing Snack Foods. This report investigates consumers' likely response to a tax on snack foods that addresses public health issues generated by rising U.S. obesity rates. Findings suggest that the impacts on dietary quality from the tax are small and negligible at the lower tax rates. If taxes were earmarked for funding information programs, as several proponents suggest, taxes would generate a revenue stream the public health community could use for nutrition education.

The Economics of Fruit and Vegetable Choices. The newly released USDA *MyPyramid* and the 2005 *Dietary Guidelines* encourage Americans to raise their consumption of fruits and vegetables. USDA food supply data indicate that Americans eat 1.4 servings of fruit daily, less than half the 4 servings or 2 cups recommended in the 2005 *Dietary Guidelines* for adults eating 2,000 calories per day. Marketers and nutritionists alike have puzzled over the reasons for Americans' fruit and vegetable shortfalls. Are fruits and vegetables too expensive? Are they incompatible with personal and household tastes or the modern trend to eat out more? Do nutrition benefits matter to knowledgeable consumers? To shed light on the persistent difficulty in increasing U.S. produce consumption, ERS published *Understanding Economic and Behavioral Influences on Fruit and Vegetable Choices*. In this report, ERS researchers examined how economic, social, and behavioral factors influence consumers' fruit and vegetable choices.

Economics and Obesity. The growth in overweight and obesity in the U.S. has genetic, physiologic, psychological, sociologic, and economic underpinnings. The basic economics involves shifts in relative prices: The technological changes driving modern economic growth have raised household incomes, reduced the price of food, and increased the price of physical activity. The resulting increase in energy consumption and flattening of energy expenditure has tilted the weight equation in favor of a steady weight gain across all segments of U.S. society. This report, *The Price is Right: Economics and the Rise in Obesity*, examines the shifts in relative prices that have helped fuel the rise in overweight and obesity. These shifts do not necessarily indicate market failure or an obvious role for government intervention.

Obesity and Public Policy. Action to combat obesity and overweight could come in many forms because many variables influence diet and lifestyle choices. The wide range of factors contributing to food choices is compounded by the incredible variety of foods and consumption opportunities available today: We make choices among thousands of food products, about whether to eat at home or in a variety of restaurants, and about lifestyles, such as diet quality and exercise. As a result of nearly unlimited choice, public policy that targets specific foods or lifestyle choices could have surprising unintended consequences. In this report, *Obesity Policy and the Law of Unintended Consequences*, ERS researchers have examined some of the potential intended and unintended consequences of three widely discussed obesity policies—nutrition labels in restaurants, taxes on snack foods, and restrictions on food advertising to children. The research focuses on the likely effect of each program on producer and consumer incentives and on health outcomes. In every case, the unintended effects could dampen the policy's success in reducing overweight and obesity.

Supermarket Cost Characteristics. Whether the poor pay more for food than other income groups matters to their nutrition and health; therefore, the operating costs of the stores at which they shop matter. The ERS report, *Supermarket Characteristics and Operating Costs in Low-Income Areas* examined a range of questions related to these issues. Stores serving low-income shoppers differ in important ways from stores that receive less of their revenues from food stamp redemptions. Stores with more revenues from food stamps are generally smaller and older and offer relatively fewer convenience services for shoppers.

They also offer a different mix of products, with a relatively high portion of sales coming from meat and private-label products. Metro stores with high food stamp redemption rates lag behind other stores in adopting progressive supply chain and human resource practices. Finally, stores with the highest food stamp redemption rates have lower sales margins relative to other stores but have significantly lower payroll costs as a share of sales. Overall, operating costs of stores with high food stamp redemption rates are not significantly different from those of stores with moderate redemption rates. If the poor do pay more, factors other than operating costs are likely to be the reason.

ERS Per Capita Food Consumption (Availability) Data. ERS maintains the U.S. per capita food consumption data system. This system is an important statistical indicator that tracks food and nutrient availability from 1909. The data facilitate policymaking and regulatory decisions about farm assistance programs, nutrition education, public health programs, and regulation of vitamin and mineral fortification and food labeling. In February 2005, ERS released an updated, redesigned per capita food consumption data system. This system includes per capita food availability data for all commodities through 2003. Users can either download standard spreadsheets or use the newly expanded custom database to develop tables or charts for specific food groups, commodities, and years. In addition, for the first time, spreadsheets are now available on per capita servings (also known as per capita food intake data or loss-adjusted food supply data). The spreadsheets can then be compared with serving recommendations for the U.S. population.

Other Preferences Compete With Healthful Eating Intentions. Health-oriented government agencies have had limited success at encouraging Americans to eat a healthful diet. One reason may be that other preferences compete with the desire to eat healthfully. The study explored the effect of consumer preferences on the demand for food away from home, including frequency of eating out and choice of outlet type. Preferences for convenience and ambience are found to influence behavior. Furthermore, omitting these variables from econometric models can bias the estimated effect of preferences for a healthful diet.

Specific activities to move the program toward the desired goal

ERS research and analytical activities are designed to enhance understanding by policymakers, regulators, program managers, and organizations shaping public debate of economic issues relating to the nutrition and health of the U.S. population, including factors related to food choices, consumption patterns at and away from home, food prices, nutrition assistance programs, nutrition education, and food industry structure. These activities support achievement of USDA's Goal 5, "Improve the Nation's nutrition and health."

ERS will identify key economic issues affecting food prices and food consumption patterns; use sound analytical techniques to understand the immediate and broader economic and social consequences of the changing structure of the food industry and of policies and programs aimed at ensuring consumers equitable access to affordable food and to promote healthful food consumption choices; and effectively communicate research results to policymakers, program managers, and those shaping the public debate regarding healthful and nutritious diets. Examples of these activities will include the following:

- Providing economic analysis of the food marketing system to understand factors affecting the availability and affordability of food for American consumers.
- Providing enhanced annual estimates of the quantity of food available for human consumption and measures of disappearance and loss in the food system.

- Providing economic analysis of how people make food choices, including demands for more healthful, nutritious, and safer food; and of the determinants of those choices, including prices, income, education, and socio-economic characteristics.
- Conducting analyses of the benefits and costs of policies to change behavior to improve diet and health, including nutrition education, labeling, advertising, and regulation.
- Conducting evaluations and economic analyses of the impacts of the Nation's domestic food and nutrition assistance programs, including the Food Stamp Program; the Special Supplemental Nutrition Program for Women, Infants, and Children; the School Lunch Program; and the Child Nutrition Programs.
- Evaluating the dietary and nutritional outcomes of USDA's food and nutrition assistance programs.
- Conducting research on food program targeting and delivery to gauge the success of programs aimed at needy and at-risk population groups, and to identify program gaps and overlaps.
- Conducting research on program dynamics and administration, focusing on how program needs change with local labor market conditions, economic growth and recession, and how changing State welfare programs interact with food and nutrition programs.

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policymakers and decision makers. These activities will include the following:

Flexible Consumer Behavior Survey. The Flexible Consumer Behavior Survey (FCBS) is being developed to fill the major gap in information on the eating habits of Americans that was left by the discontinuation of USDA's Diet Health Knowledge Survey (DHKS). While FCBS will continue the core function of the DHKS by gathering information about the nutrition knowledge, attitudes and beliefs of a nationally representative sample of Americans, it is a new survey with a strong focus on the economic trade-offs involved in eating and health behavior choices that affect people's health in the future. The survey will be fielded in 2006-2008 with research data available in 2009.

Food Stamp Program Certification Costs. The Food Stamp Program is the largest of USDA's nutrition assistance programs, accounting for almost 60 percent of total expenditures for nutrition assistance. The administration of the program is a major expense to USDA and the States. In FY 2001, the cost of State and Federal administration of the program was \$4.4 billion. The Federal share of this cost was \$2.2 billion or about 50 percent. Administrative costs represented 28 percent of total program expenditures, or an annual \$597 per household. This study will determine the contribution of certification and other major functions to the total program administrative costs from 1989 to 2001. The study will also examine the relationship between certification costs, caseload characteristics, policies, and error rates. The final report is expected to be published in 2006.

Synthesis of research on the economics of food choice. A large number of studies on the economics of food choice have been conducted – many of them sponsored by ERS and USDA. ERS will synthesize this research to address key policy questions such as "Can the poor afford a healthy diet?" and "Do Americans make unhealthy food choices because healthy food is more expensive than unhealthy foods?" The synthesis will be housed in an easily accessible and updatable web product. This project/product is in response to requests by policymakers.

Effect of Fruit and Vegetable Imports Affect on American Diets. The 2005 Dietary Guidelines for Americans calls for increased intakes of fruits and vegetables because diets rich in fruits and vegetables are likely to reduce the risk of many chronic diseases. Fruit and vegetable imports heavily influence the

American diets. Imports supply about one-third of the fresh fruits and one-tenth of the fresh vegetables consumed annually in the United States. The growing volume of seasonal fruits and vegetables imported by the United States has a price-smoothing effect and stimulated consumption throughout the year. The objective of this project is to examine the patterns of U.S. fruit and vegetable imports and their effects on American diets.

Economic Determinants of School Meal Participation. This project will examine the factors associated with variations in participation in USDA's school meals programs at both the school and individual level, with particular emphasis on how participation varies with local food prices. Data from the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K) will be combined with contextual data on local area food prices, and on neighborhood and school district characteristics. Researchers will use the data to examine the neighborhood, school, family, and individual characteristics associated with elementary school children's participation in the National School Lunch Program and School Breakfast Program.

Expert Review Panel Examines Food Security Measurement. In the 1990s a Federal interagency working group developed a food security survey module to measure conditions and behaviors in U.S. households that face challenges in putting enough food on the table. A substantial body of survey data has been collected and used to conduct research on food security and hunger. Objectives of the Food and Nutrition Service's 2000-2005 Strategic Plan make use of food security statistics. At this ten-year anniversary of the inception of food security measurement, this project provides support for a National Academy of Sciences panel to review the conceptualization and methods for measuring food security for monitoring, evaluation, and related research purposes. The final report will be on the food security measure by the National Research Council, National Academies of Sciences will be published in 2006.

Food Insecurity and Outcomes for Infants and Toddlers in the ECLS-B. The subject of this study is the association between food insecurity and a variety of health, nutrition, motor development, cognitive, social, and emotional outcomes for infants and toddlers. Researchers will determine how the associations and pathways differ based on characteristics of children and their families, including birth weight, income, parental nativity, and participation in nutrition assistance programs. The study will use data from the 9- and 24-month waves of the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B).

Determinants of the Food Stamp Caseload. This study will examine the determinants of the large drop in the Food Stamp caseload in the 1990s and large rise in the mid-2000s. State-level panel data constructed from the Food Stamp Program Quality Control administrative data from 1990 to 2004 will be used. The analysis will consider the separate effects of Food Stamp Program policy, welfare policy, and the economy.

Commodity Supplemental Food Program: Participation and Administration. This project will combine administrative data with telephone interviews in nine States and field work at eight sites to assess how the Commodity Supplemental Food Program (CSFP) fits into States' overall designs to address food insecurity among target populations, how States administer the program, why some States choose not to participate, who among the eligible population tend to participate, and expectations for the future of the CSFP.

Understanding the Food Choices of Low-Income Urban Households. A better understanding about low-income household food choices and the specific factors that influence them can lead to improved health and nutrition by improving the effectiveness of targeted nutrition assistance programs and initiatives such as the food stamp program, food stamp nutrition education programs, and social marketing efforts. In

addition, the knowledge gained about food shopping and availability of foods in urban settings can be used to inform policies aimed at improving the quality and variety of retail stores and food choices.

Goal 6: Protect and Enhance the Nation's Natural Resource Base and Environment

<u>Project Statement</u>							
(On basis of appropriation)							
	2005 Actual		2006 Budget		2007 Estimated		
	<u>Amount</u>	<u>Staff Years</u>	<u>Amount</u>	<u>Staff Years</u>	<u>Increase or Decrease</u>	<u>Amount</u>	<u>Staff Years</u>
Goal 6:	\$7,322,962	56	\$7,367,000	58	\$150,000	\$7,517,000	58

ERS is expanding its research program on invasive species that affect livestock and crop production and the programs that control them. This activity contributes to USDA's efforts to prevent or control invasive species. An important concern is reducing the economic risks of invasive species to U.S. agriculture while preserving economic gains from trade and travel. ERS and the Animal and Plant Health Inspection Service created an Invasive Species Working Group to make suggestions on how economic analyses can better contribute to pest risk assessments and control decisions by the public and private sectors. ERS is engaged in ongoing evaluation of the research being produced through its external grants program.

ERS has launched a research project to examine the two primary working lands programs—the Environmental Quality Incentives Program (EQIP) and the new Conservation Security Program (CSP) —individually and in combination. That project will fill a large gap in the knowledge base relating to the implications of the myriad decisions necessary to design a working lands program. Many decisions needed to implement current working land programs have yet to be made or may be revisited over the next few years. This project will focus on coordination between EQIP and CSP, an issue that has yet to be addressed in research or in the policy process.

In addition, ERS is continuing to contribute to USDA's efforts to improve the science behind Federal water and air quality regulations and programs. As part of its analysis of environmental regulations and conservation incentive policies, ERS is evaluating policy coordination to achieve multiple goals from agricultural operations. ERS is continuing to explore the benefits of coordinating environmental quality policies across different media (e.g., air and water) when pollutants originate from the same source (e.g., confined animal feeding operations). ERS research continues to provide insight into developing policies for controlling nonpoint source pollution.

Selected Examples of Recent Progress:

Integrating USDA Surveys To Evaluate Conservation Programs. This ambitious project involved a joint ERS, National Agricultural Statistics Service (NASS), and Natural Resources Conservation Service (NRCS) effort to integrate two major surveys that are based on different sampling frames. With this integration complete, USDA now has a greatly improved capacity to analyze the implications of its conservation programs, improve the cost-effectiveness of the its surveys, and reduce respondent burden. For the Conservation Effects Assessment Project (CEAP), a Natural Resources Institute -based conservation practice survey was designed to assist NRCS's evaluation of the environmental benefits of conservation programs funded through the 2002 Farm Act. The Agricultural Resource Management Survey (ARMS) is a multiphased, field- farm-based survey used to support the ERS and NASS

environmental and economic statistics programs. ERS researchers have contributed their expertise to developing a joint ARMS/CEAP questionnaire, which was used in a 2004 pilot survey of wheat farms. The current plan calls for expanding the ARMS/CEAP integration process to the whole sample.

Conservation Policy on Working Lands. The Farm Security and Rural Investment Act of 2002 redresses the past imbalance in USDA's conservation programs toward land retirement by providing a major increase in funds to promote stewardship on working lands. An ERS research project identified issues in the design of working land policies and the potential economic and environmental impacts of alternative designs. It also considered how the findings apply to implementing the Environmental Quality Incentives Program (EQIP), the prominent working land program to date, and the Conservation Security Program (CSP), the first-ever entitlement agri-environmental program. These two programs pursue similar environmental goals, but they differ in terms of eligibility, payment base, and incentive structure.

Initial research on "benchmarks" of the agri-environmental payment program was published in the report, *Instrument Choice and Budget-Constrained Targeting*. The research shows that, when budgets are constrained, benchmarks can be an important tool for achieving cost-effective environmental gains. Benchmarks based on pre-program levels of nutrient runoff are not optimal, even if payment rates are optimally differentiated among heterogeneous producers. ERS published another report, *Flexible Conservation Measures on Working Land*, which reviews the design and implementation of working land payment programs (WLPPs). The analysis illustrates environmental and economic impacts of alternative WLPP designs. Environmental cost-effectiveness of WLPPs can be improved through the use of benefit-cost targeting and competitive bidding on financial assistance.

The Conservation Reserve Program's (CRP) Economic Impacts. ERS produced a report that presents the findings of a study that examines the economic impact of the CRP on rural communities. The study shows that high CRP enrollment does not significantly affect rural population trends and its dampening effect on employment trends is relatively small and short lived. Even when farm operators enroll their entire farms in CRP, the local economic effects are muted. Nonetheless, whole- and partial-farm enrollment is associated with different beginning-farmer trends, whole-farm enrollments are negatively related, and partial-farm enrollments are positively related to changes in the number of beginning farmers. The research also indicates that the CRP's effects on wildlife and water quality lead to a rise in spending on outdoor recreation of as much as \$300 million per year. The study found no statistically significant evidence that CRP participation encourages absentee ownership or that high levels of CRP participation affect local government services or tax burdens in a systematic way. The level of permissible CRP rental payments can influence the type of land enrolled in the CRP and the program's environmental benefits, but based on ERS's simulations, such impacts are small.

Flexible Conservation Measures on Working Land. Agricultural production can damage the environment. Although past conservation efforts—particularly land retirement—have helped, agri-environmental problems remain. Because most agricultural land (850 million acres) remains in production and many agri-environmental problems are the result of small contributions from many widely dispersed improving environmental performance on "working lands" is an important next step. Once a working land payment program has been designed—before any producers are enrolled or any contracts are signed—most of what can be done to ensure that program objectives are achieved is locked in place. If funding is limited, program goals are likely to be reached only if program decisionmakers can anticipate the effect of enrolling a given producer. Producers will apply for participation when the benefits they receive outweigh their costs, which will depend on program details. Program decisionmakers may apply enrollment screening criteria to determine which applicants are enrolled. Participation patterns then determine the environmental and economic outcomes of the program. The

trick is to (1) develop a request for proposals that is attractive to producers who can contribute to reaching program goals and (2) develop enrollment screening criteria that use information provided by the applicants to select those best suited for the job.

Managing Manure to Improve Air and Water Quality. U.S. environmental laws tend to focus on a single environmental medium (e.g., Clean Water Act, Clean Air Act, and Endangered Species Act). When a single pollution source simultaneously can affect more than one environmental medium, a single-medium approach to pollution control can confound policymakers concerned with economic efficiency. An uncoordinated set of policies that independently address different pollution issues can result in unnecessary and unanticipated economic and environmental costs. To address these concerns, ERS assessed the economic and environmental tradeoffs between water and air quality policies. The study found that air and water quality regulations would be more cost effective if implemented simultaneously, which would allow farmers to select the most appropriate mix of practices to satisfy environmental quality goals while maximizing net returns. With uncoordinated environmental policies, farmers may have to make costly changes to practices more than once before both environmental goals can be met. To meet a water quality goal, farmers tend to use practices that increase ammonia emissions to the air. To meet an air quality goal, farmers tend to use practices that increase nitrogen losses from fields to ground and surface waters. Meeting both air and water quality goals would likely cost more than meeting either air or water goals. Depending on how air quality regulations are applied, this could have two impacts on concentrated animal feeding operations and water quality. Anticipating the different forms and pathways that nitrogen takes can keep air quality and water quality policies from working at cross purposes. Then, true solutions—like diet manipulation (to reduce the amount of nitrogen excreted by animals) or industrial uses of manure—might become clearer.

Specific activities to move the program toward the desired goal

ERS research and analytical activities are designed to enhance understanding by policymakers, regulators, program managers, and those shaping public debate of economic issues related to developing Federal farm, natural resource, and rural policies and programs that protect and maintain the environment while improving agricultural competitiveness and economic growth. These activities support achievement of USDA Goal 6, “Protect and Enhance the Nation’s Natural Resource Base and Environment.”

ERS will identify key economic issues related to interactions among natural resources, environmental quality, and the agriculture production system. ERS also will use sound analytical techniques to understand the immediate and broader economic and social consequences of alternative policies and programs to protect and enhance environmental quality associated with agriculture. ERS will effectively communicate research results to policymakers, program managers, and those shaping public debate on agricultural resource use and environmental quality.

ERS supports the USDA Food Quality Protection Act activities and Integrated Pest Management and Related Programs crosscut through its research on how economic issues affect farmers’ choices among alternative pest management practices and technologies. ERS supports the Invasive Non-Native Species crosscut by improving economic estimates of the risks posed by non-native weeds.

ERS supports the USDA Biotechnology Coordinating Council and interdepartmental efforts with the Food and Drug Administration and the Environmental Protection Agency in the biotechnology crosscut through research that addresses both product impacts for farmers and industry behavior and potential impacts from industry concentration in this area. Research and related data collection efforts are designed to capture this rapidly emerging and turbulent technological change. Examples of these activities will include the following:

- Assessing policies designed to exclude, monitor, and control invasive pests with regard to the economic efficiency of different prevention and control strategies for invasive species on public lands.
- Characterizing changes in land management and shifts in agricultural land use—particularly the movement of land into and out of crop production—and the economic and environmental effects of these changes, including impacts on carbon sequestration, soil erosion, biodiversity, and nutrient management. Determining what economic and policy factors have prompted shifts between crop production and other land uses.
- Assessing the extent and spread of contracting and other structural change in production agriculture and outlining the basic economics underlying why farmers and processors have made these changes. Summarizing evidence on the environmental and economic effects of contracting and highlighting emerging policy issues created by expanded contract use and structural change, including impacts on animal waste management.

Future research and analysis will build on the successes of past performance to deepen understanding of issues explored, highlight new policy concerns revealed by prior analysis, and anticipate upcoming needs of policy and decision makers. These activities will include the following:

Multiple Object Policy Design and Implementation. ERS researchers are exploring the implications of decisionmaking when faced with multiple, noncomparable objectives. The application is the Conservation Reserve Program (CRP) and potential tradeoffs between water quality, air quality, and habitat goals. This project addresses broader questions of approaches to multiobjective decisionmaking, and uses an empirical application to the CRP to illustrate the impact on enrollment and environmental quality factors of alternative objective weights in the Environmental Benefits Index. The project addresses the fact that these weights affect which land is eventually enrolled in the CRP through two distinct channels. First, they provide a guide for landowners in deciding which, if any, land to offer for enrollment (by providing information on a bid's likelihood of success). Second, they provide program administrators with the basis for choosing which parcels (from among those offered) to enroll.

Land Use Change and the Environment. ERS researchers will attempt to characterize that portion of land that may come into or out of production in terms of land quality factors that affect both economic and environmental outcomes. Economic analysis will link land characteristics to the probability that it is used for crop production. Researchers will examine evidence of the relationship between productivity, environmental sensitivity, and the physical features of agricultural and forest lands that have and have not changed use over time. They will also estimate land use and environmental impacts from growth in crop insurance subsidies during the 1990s and the Conservation Reserve Program.

Conservation Benefits and Regional Equity. What Are the Tradeoffs? A provision in the 2002 Farm Act requires that the Natural Resources Conservation Service (NRCS) collectively make available a minimum of \$12 million in conservation funding from the Environmental Quality Incentives Program, Farm and Ranch Lands Protection Program (FRPP), Wetland Heritage Program, and Grassland Reserve Program to all states that have the applications and demand for that funding by April 1 of each year. ERS will analyze the impacts of this provision. Program data (supplied by NRCS) and various environmental data will be used to evaluate the impacts that regional equity (RE) allocations have on program outcomes. Underlying this research are questions about the efficiency and effectiveness of the programs' funding allocation mechanisms. Imposing a constraint on a single program is likely to reduce the benefits that can be gained from that program, but in a multiprogram setting, the economic intuition is less straightforward. In this case, the RE provision acts as a global distributional constraint that is layered on top of pre-

existing individual (within) program distributional constraints (e.g., FRPP gives some amount of funding to all States that apply). Funds can be allocated in many ways within each program to meet overall RE goals. The research will assess how allocations of program funds can be made to achieve RE goals while maximizing overall environmental benefits.

Partnerships

Because ERS's economic analysis covers all aspects of USDA's mission the crosscuts between ERS research and the missions and goals of other USDA agencies are extensive and complicated. ERS's unique contribution is provision of external economic analysis.

- ERS's close work with the Foreign Agricultural Service, World Agricultural Outlook Board, and the Office of the U.S. Trade Representative to analyze the international agriculture and trade effects of the World Trade Organization (WTO).
- ERS works with the Rural Development mission area to develop an integrated base of information about rural economic and social conditions that can be used for strategic planning and program performance assessment.
- ERS works with the National Agricultural Statistics Service to provide a comprehensive annual source of data to monitor the economic contribution of farming to the national economy, assess the performance of farms, and determine the well-being of farm households.
- ERS county classifications are essential to other Federal agencies, such as the the U.S. Department of Health and Human Services (HHS) that administer programs in rural areas. The new HHS Frontier Communities Program designed to provide health assistance to needy rural areas will draw heavily from ERS county classifications to determine program eligibility. ERS's unique contribution is provision of external economic analysis and the most current comprehensive data for analysis.
- ERS membership along with the Agricultural Research Service (ARS), the Food Safety and Inspection Service (FSIS), the Food and Nutrition Service (FNS), the Farm Services Administration (FSA), the Cooperative State Research, Education and Extension Service (CSREES), and the Office of Risk Assessment and Cost-Benefit Analysis (ORACBA) on the USDA Food Safety Risk Assessment Committee. ERS's unique contribution is the provision of economic analysis to complement food safety risk assessments.
- ERS is an active participant in the USDA response to the Homeland Security Presidential Directive No. 9 (HSPD-9) of January 30, 2004, which established a national policy to defend the agriculture and food system from terrorist attacks, major disasters, and other emergencies.
- ERS is working with other USDA agencies to help assess food security implications, and potential economic impacts of an epidemic, as required in the development of a National Plant Disease Recovery System (NPDRS). The ERS-GSEA team is working with DHS-funded Bio-Defense Knowledge Center researchers at Lawrence Livermore National Laboratory in an effort to strengthen economic modeling efforts. The project currently focuses on FMD analysis with a special emphasis on sharing ERS-GSEA platform information. ERS-GSEA has joined with the Army Corps of Engineers, Oak Ridge National Laboratory, and the Tennessee Valley Authority (TVA) to develop a commodity and freight transportation simulation tool that more represents the effects of transportation disruptions across rail, truck, and barge modes. In an effort to more fully understand the economic analytical tools needed to conduct long-term economic recovery assessments, ERS-GSEA, is working with staff from the Production, Emergencies, and Compliance Division of FSA, and the Federal Emergency Management Agency.
- One example of cooperative efforts relating to food and nutrition is ERS's priority setting process for economic research on food and nutrition. This process is launched with a conference where Federal policy officials both within and outside USDA, Congressional staff, public and private sector researchers, and representatives from public interest groups provide input to the identification of research priorities for the ERS Food and Nutrition Research Program.

- ERS works with the Natural Resources Conservation Service (NRCS) and the Farm Service Agency (FSA) to support formulation and implementation of the Conservation Security, Conservation Reserve, Swampbuster, and the Environmental Quality Incentives programs. Such activities bring ERS staff in close cooperation with the Department of Interior and EPA, as do ERS efforts to improve understanding of the economics of integrated pest management and resource-conserving production practices. ERS's unique contribution is provision of objective external economic analysis.

External Factors

The globalization of all aspects of the food and fiber system is a major external factor affecting American agriculture. From competitive markets around the world, to diseases that know no national boundaries, to population growth, population mobility, and evolving diets, profound changes are taking place in agricultural markets worldwide. To remain competitive, the food and agriculture sector relies on research, analysis, and data to respond to these factors.

A range of external factors that affect economic activity in rural America. These factors include, but are not limited to, the levels of funding Congress provides for USDA and other programs designed to expand economic opportunities and enhance quality of life in rural America.

The market disruptions caused by the discovery of BSE in Canada and Washington state last year, and this year's outbreaks of exotic Newcastle disease and Avian Influenza highlight the potential economic consequences of threats to the agricultural and food supply chains. The introduction of threats to the agriculture and food sectors—whether accidental or intentional—that may pose a threat to human health and to the environment, making prevention, early detection, identification, and rapid control or eradication a vital challenge.

One key to achieving the goal of a safe, well-nourished nation is to initiate and integrate a multi-disciplinary approach to issues in the areas of food security and obesity. These areas pose daunting challenges that no single discipline can solve. Teams from a wide variety of professions must work together to achieve the objective of lowering obesity rates and securing our food supplies. Likewise the marketing and product development challenges of the future will require vast expertise in multiple areas if the U.S. food system is to remain the world leader. ERS's success in this program area will depend on our ability to marshal external resources, including both people and data, to successfully meet our obligations.

Agricultural lands are co-mingled with urban and developing land as part of watersheds and ecosystems. Activities taking place in parts of forests, lands or watersheds outside USDA influence can offset the effects of improved management on agricultural land, so that the state of the whole watershed may fail to improve as much as expected. Also many factors influence the economic incentives of farmers, e.g., interest rates, exchange rates, and tax policy, that are beyond the scope of agricultural or conservation policy and may therefore mitigate the influence those policies may have.

Summary of Budget and Performance Key Performance Outcomes and Measures

Agency Goal: The long-term performance goal across USDA and agency goal areas is the successful execution of the ERS program of economic research and analysis to provide policymakers, regulators, program managers, and those shaping the public debate on agricultural economic issues with timely, relevant, and high-quality economic research, analysis, and data to enhance their understanding of economic issues affecting food and agriculture. A general discussion of performance measurement follows.

Key Outcome: The key outcome of the ERS program is to inform and enhance public and private decision making on economic and policy issues related to agriculture, food, the environment, and rural development.

Application of the Research and Development Investment Criteria at ERS

The framework for assessing the performance of the ERS economic research and analysis program centers on adherence to the Research and Development Investment Criteria principles of relevance, quality, and performance. Agency assessment practices provide a broad framework for assessing success in achieving these criteria. ERS research and management practices use many methods to apply the research and development investment criteria. These practices are designed to ensure that the direction of agency research activities reflects current and anticipated needs of ERS stakeholders and customers, that research and analysis produced by the agency adheres to disciplinary standards to ensure the highest possible quality, and that the agency's research products are delivered in a way that is accessible to customers.

Principal practices to ensure research quality

ERS staff publishes research and analysis in a variety of outlets, such as research monographs, ERS periodicals, journals, and presentations outside ERS. For all products, the overriding objective is high-quality economic analysis and communication of findings. Review and clearance is a collaborative process that begins with defining the questions and hypotheses to be investigated and selecting the appropriate methodologies. Official review and clearance guidelines are designed to ensure high-quality analysis.

All products must meet disciplinary standards for quality and must receive substantive peer reviews by qualified experts who have the background, perspective, and technical competency to provide a meaningful assessment of the research design and findings. Reviewers are composed of a mix of individuals outside the author's immediate work unit and at least one from outside the agency. In addition, publications that involve other Federal programs must be reviewed by researchers/analysts from the relevant program agency.

ERS economic research and analysis includes two extramural research programs, the Food Assistance and Nutrition Research Program (FANRP) and the Program of Research on the Economics of Invasive Species Management (PREISM). FANRP's competitive grants and cooperative agreements fund research on strengthening economic incentives in nutrition assistance programs; nutrition assistance as a safety net; and obesity, diet quality, and health outcomes. PREISM examines the economic issues related to managing invasive pests in increasingly global agricultural markets. The ERS program focuses on national decisionmaking concerning invasive species of agricultural significance affecting, or affected by, USDA programs. Both programs are publicly announced and competitively awarded through the use of peer review panels.

Economist and social scientist positions at ERS are subject to regular review under the Economic Position Classification System (EPCS) process. EPCS is a peer review process that examines the accomplishments of individual economists and social scientists to ensure that their positions are classified properly. EPCS is based on the “impact of the person on the job” concept, which recognizes that what a person does and how he or she does it can in fact alter the very nature of the job.

Principal practices to ensure research relevance

ERS interacts with stakeholders and customers in many ways to ensure that the research agenda focuses on topics relevant to public and private decision makers. One example of such interaction centers on involving stakeholders in discussions of potential research issues relevant to a given area. ERS regularly convenes workshops, stakeholder sessions, or other meetings in which the results of recent agency research are discussed, upcoming policy issues are identified, and questions for future research are explored. In this way, interaction with stakeholders and customers helps sharpen the agency’s research focus to better anticipate future needs for public and private decision makers. Another method to ensure relevance of agency research and analysis centers on ERS strategic planning processes. Strategic planning processes at ERS involve discussing with stakeholders the retrospective assessment of research accomplishments and agency impact, identifying key policy areas for potential future impact, and establishing research program priorities.

In addition to efforts to ensure the relevance of long-term research, ERS also asks customers to assess the relevance of staff analysis provided to USDA and other government officials. ERS uses a short questionnaire to sample customers of staff analysis to gather feedback from them about relevance, usefulness, timeliness, and accessibility of the product delivered. The instrument provides valuable insight into the relevance of information from ERS in informing decisions by key policymakers.

The ERS magazine, *Amber Waves*, relates ERS research to current events in a way that highlights its usefulness and relevance. In 2005, the National Association of Government Communicators (NAGC) recognized *Amber Waves* as the best national electronic magazine published by a Federal, State, or local government. NAGC sponsors an annual competition, the Blue Pencil (print) and Gold Screen (electronic) Awards, recognizing excellence in written, filmed, audio/videotaped, published, and photographed government information products.

Principal practices to assess performance: key performance measures

ERS employs several practices to assess research program performance. These activities are designed to identify how ERS research contributes to the discussion of issues in a sector, how effectively agency information is communicated to customers, and how the efficiency of the program can be improved. Central to effective ERS performance is successful completion of planned research that enhances understanding by policymakers, regulators, program managers, and those shaping the public debate of economic issues related to food, agriculture, the environment, and rural development. A challenge for providing an overall assessment of research program performance is to use a set of measures that, taken together, provide a comprehensive view of program performance.

A key component of evaluating agency performance in these areas is program evaluation conducted by outside review panels. Panels assess the relevance, quality, and performance of agency programs by using the quantitative assessment tool based on the research and development investment criteria. The degree of program effectiveness can be summarized by a review panel through application of a quantitative performance assessment tool that considers factors key to successful research. This process consists of a three-category performance indicator that reflects the interval of the point score achieved on a quantitative research program assessment tool.

Data and other information collected for the ERS performance measurement framework are used to monitor, evaluate, and revise program activities and resource allocation to meet changing priorities in support of the ERS mission. ERS management regularly discusses implementation of research activities to ensure continued and improved agency effectiveness. The outcome of program review activities has been used as a basis for resource allocation and strategic planning activities for the food economics program. The results of the American Customer Satisfaction Index (ACSI) customer survey indicate a customer priority for improving data accessibility and dissemination. These priorities are reflected in current activities to improve data dissemination via the ERS website. The results from the ACSI website customer satisfaction survey are used to inform initiatives to improve navigation on the ERS website.

ERS strategic planning activities include reviews of progress in meeting program plans and implementing revisions, as necessary. Changes reflect activities to ensure continued relevance of ERS research and analysis activities and to continue to provide useful and appropriate products to customers. ERS strategic planning includes discussions with customers and stakeholders on prospective research projects to meet anticipated needs of policy officials. Stakeholder conferences are used to help set priorities for ERS extramural funding programs. FY 2007 ERS budget initiatives are aimed at responding to interests of ERS customers for continued relevant research, analysis, and data.

Performance Measure	FY 2002 Actual	FY 2003 Actual	FY 2004 Actual	FY 2005 Actual	FY 2006 Target	FY 2007 Target
Portfolio Review Score: Qualitative assessment by external experts of the relevance, quality, and performance of ERS research portfolios to enable better informed decisions on food and agricultural policy issues.	NA	NA	NA	Excellent	Excellent	Excellent
ACSI Customer Satisfaction Rating ¹	NA	NA	NA	75	74	76
Policy Official Satisfaction Survey	NA	NA	NA	97	80	82
Customer satisfaction with the ERS website	NA	74	72	72	72	73
Timeliness of ERS information and analysis on current and emerging events/issues	NA	NA	NA	81	83	84
Percent of requested analysis delivered on time	94	95	94	95	100	100
Index of ERS Product Releases per Staff Year	1.09	1.42	1.68	1.75	1.77	1.82

¹ Data for future targets for this measure are for the years, 2008 and 2011.

Portfolio Review Score

Qualitative assessment by external experts of the relevance, quality, and performance of ERS research portfolios to enable better informed decisions on food and agricultural policy issues. A series of independent expert review panels will conduct a cycle of reviews over five years to evaluate the effectiveness of the ERS program of economic research and analysis to enable better informed decisions on food and agricultural policy issues. The reviews will include a capstone review of the entire program

at the end of the review cycle. The program components scheduled for review are: (a) food economics (Oct. 17-18, 2005), (b) agricultural competitiveness, (c) natural resource conservation and management, and (d) farm and rural well-being. In each review, the external panel will assess the relevance, quality, and performance of program plans, activities, and accomplishments. This assessment will include an evaluation using a quantitative analysis tool to rate portfolio effectiveness on a multi-category scale (excellent, adequate, needs improvement). The panel recommendations will be used in agency strategic planning and priority setting.

ACSI Customer Satisfaction Rating

This measure is designed to assess the satisfaction of private and other external customers with the relevance, usefulness, and accessibility of ERS research, data, and analysis, as measured by the American Customer Satisfaction Index (ACSI). This measure tracks relevance and usefulness of ERS research, analysis, data products, and services, as determined through a survey of agency customers using the ACSI. The survey was conducted in July 2005, with final results delivered in October 2005. ERS customer satisfaction rated above targeted levels, and above average customer satisfaction with government programs.

Policy Official Satisfaction Survey

This measure is designed to assess the satisfaction of USDA and other government decisionmakers with the relevance and usefulness of requested analysis. ERS provides a broad range of research, data, and analysis for public and private decisionmakers to use in their analysis of economic issues affecting the food and agricultural sector. Throughout the year, policy officials from USDA agencies or outside of the department request that ERS provide analysis on a specific question of interest to the requestor. Such questions, referred to as “Staff Analysis,” provide policy officials with assessments relevant to their particular questions, and the analyses are typically requested for quick turnaround. This measure assesses requestors' satisfaction with the usefulness of materials provided by ERS in response to their requests for short-term, tailored research, analysis, and data.

Customer satisfaction with the ERS website

In recent years, ERS recast its information dissemination and communications channels to adopt a web-centric approach to communicating with customers. As a result, all ERS research, data, and other information disseminated by the agency is available through the ERS website. This measure is an indicator of customer satisfaction with the ERS website using a survey based on the American Customer Satisfaction Index (ACSI). The measure tracks satisfaction of website users and provides a basis for comparison with similar government and private-sector websites. The target for this measure is at or above the average rating for government websites in the Information/News category.

Timeliness of ERS information and analysis on current and emerging events/issues

Information and analysis produced by ERS is timely and pursued by numerous customers. ERS seeks to anticipate issues, performs research, and presents the material in a timely and accessible manner. The measure reflects ERS's ability to anticipate issues and the extent of information and analysis produced to inform discussion on those issues. An independent source indicates the major issues occurring during a year. This measure identifies the share of major issues for which ERS provides current research and analysis.

Percent of requested analysis delivered on time

ERS provides a broad range of research, data, and analysis for public and private decisionmakers to use in their analysis of economic issues affecting the food and agricultural sector. Throughout the year, policy officials from USDA agencies or outside of the department request that ERS provide analysis on a

specific question of interest to the requestor. Such questions, referred to as “Staff Analysis,” provide policymakers with assessments relevant to their particular questions, and are typically requested based on quick turnaround. This measure tracks the timeliness of responses by ERS to requests for short-term, tailored research, analysis, and data from government policymakers. A measure of agency performance is the timeliness with which responses are provided to the customer. Over the last 5 years, ERS staff analysis has met predetermined deadlines for over 90 percent of all such requests.

Index of ERS Product Releases per Staff Year

ERS has carefully redefined its product mix and publication policy to target and present our research findings and information in a logical fashion. During the period 2001-05, the number of products released increased from 238 to 365. During that time SYs declined from 491 SYs to 430 SYs. Using these numbers and basing them to 2001=1 results in product release efficiency going 1.0 in 2001 to 1.75 in 2005. Even if the number of products remained constant over time, productivity would need to increase to sustain production levels. The ratio is calculated as [number of products released]/[total SYs] for each fiscal year. Every year is then compared to the ratio value in 2001. While not all products are equal in size (volume of material), our peer review and clearance process ensures all products are of high quality. The measure used defines outputs as all published items, web-based briefing rooms, and data products. Staff years include all research, support and administrative staff.

PART Assessments

The Economic Research Service’s entire economic research and analysis program was assessed with the OMB Program Assessment Rating Tool (PART) for the FY 2007 budget. The overall program rating was “effective.” PART findings concluded that ERS ensures its research quality through internal and external peer reviews, customer satisfaction with ERS products has been at or above target levels, and ERS is monitoring the timeliness of its research by tracking the correlation between its activities and coverage in the media and the level of public interest as measured by website visits. The PART assessment recommended that (1) ERS continue to track the measures that have only baseline or partial data to ensure that performance is improving or remaining on target, and (2) ERS determine the impact of research by surveying users on the extent to which they find ERS products useful in decisionmaking. ERS is undertaking activities to track its performance measures and to continue surveying customers about the usefulness of ERS products in decision making.